

*In the Matter of*

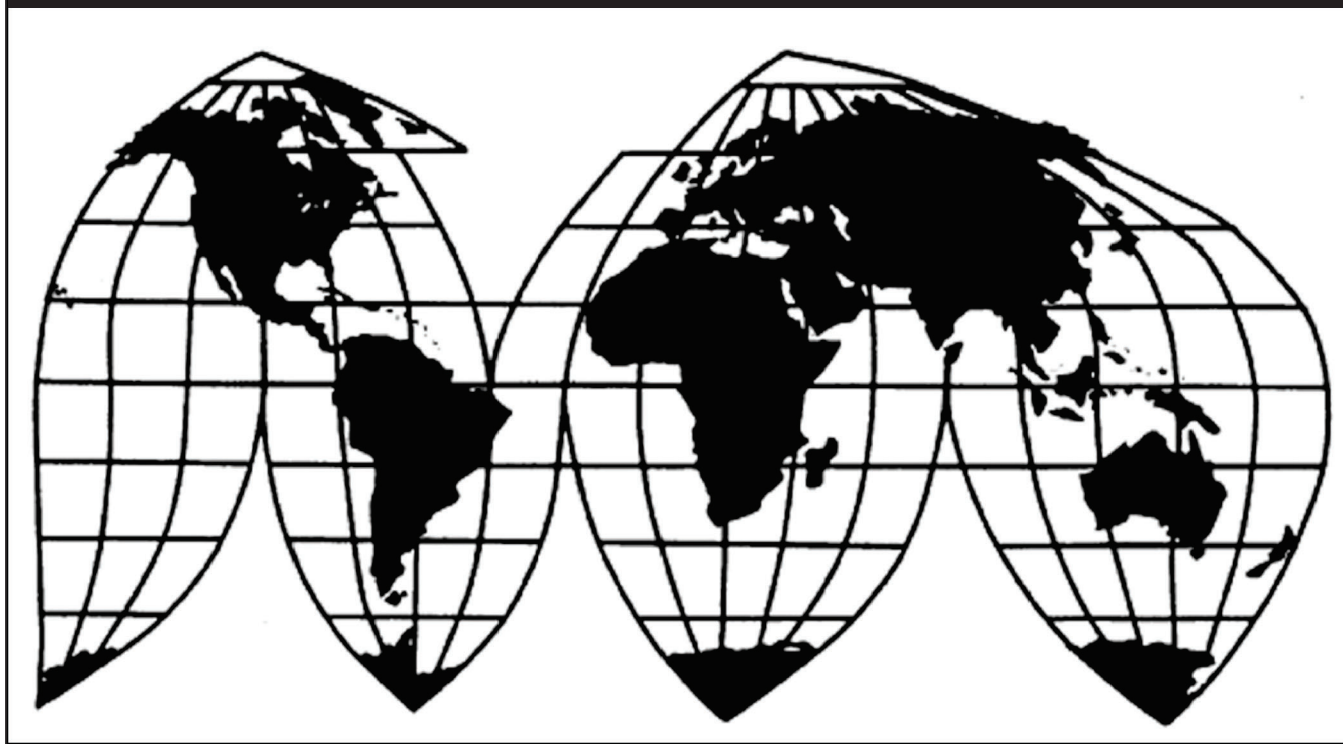
**CERTAIN DIGITAL VIDEO RECEIVERS AND  
HARDWARE AND SOFTWARE  
COMPONENTS THEREOF**

Investigation No. 337-TA-1001

Publication 4931

August 2019

**U.S. International Trade Commission**



Washington, DC 20436

# **U.S. International Trade Commission**

## **COMMISSIONERS**

**Rhonda Schmittlein, Chairman**  
**David Johanson, Vice Chairman**  
**Irving Williamson, Commissioner**  
**Meredith Broadbent, Commissioner**

**Address all communications to  
Secretary to the Commission  
United States International Trade Commission  
Washington, DC 20436**



# **U.S. International Trade Commission**

Washington, DC 20436  
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**CERTAIN DIGITAL VIDEO RECEIVERS AND  
HARDWARE AND SOFTWARE  
COMPONENTS THEREOF**

Investigation No. 337-TA-1001



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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**NOTICE OF THE COMMISSION'S FINAL DETERMINATION FINDING A  
VIOLATION OF SECTION 337; ISSUANCE OF A LIMITED EXCLUSION ORDER  
AND CEASE AND DESIST ORDERS; DENIAL OF PETITION REQUESTING  
RECONSIDERATION OF COMMISSION DETERMINATION FINDING PETITION  
OF CERTAIN ISSUES TO BE WAIVED; TERMINATION OF THE INVESTIGATION**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission (the "Commission") has found a violation of section 337 in this investigation and (1) has issued a limited exclusion order ("LEO") prohibiting importation of certain digital video receivers and hardware and software components thereof, and (2) has issued cease and desist orders ("CDOs") directed to the Comcast respondents. This investigation is terminated.

**FOR FURTHER INFORMATION, CONTACT:** Ron Traud, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone 202-205-3427. 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 at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket ("EDIS") at <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:** The Commission instituted this investigation on May 26, 2016, based on a complaint filed on behalf of Rovi Corporation and Rovi Guides, Inc. (collectively, "Rovi"), both of San Carlos, California. 81 FR 33547-48 (May 26, 2016). The complaint, as amended, alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 ("section 337"), by reason of infringement of certain claims of U.S. Patent Nos. 8,006,263 ("the '263 patent"); 8,578,413 ("the '413 patent"); 8,046,801 ("the '801 patent"); 8,621,512 ("the '512 patent"); 8,768,147 ("the '147 patent"); 8,566,871 ("the '871 patent"); and

6,418,556 (“the ’556 patent”). The complaint further alleges that a domestic industry exists. *Id.* at 33548.

The Commission’s notice of investigation named sixteen respondents (collectively, “Respondents”). The respondents are Comcast Corporation of Philadelphia, PA; Comcast Cable Communications, LLC of Philadelphia, PA; Comcast Cable Communications Management, LLC of Philadelphia, PA; Comcast Business Communications, LLC of Philadelphia, PA; Comcast Holdings Corporation of Philadelphia, PA; Comcast Shared Services, LLC of Chicago, IL (collectively, “Comcast”); Technicolor SA of Issy-les-Moulineaux, France; Technicolor USA, Inc. of Indianapolis, IN; Technicolor Connected Home USA LLC of Indianapolis, IN (collectively, “Technicolor”); Pace Ltd. of Saltaire, England (now ARRIS Global Ltd.); Pace Americas, LLC of Boca Raton, FL; ARRIS International plc of Suwanee, GA; ARRIS Group Inc. of Suwanee, GA; ARRIS Technology, Inc. of Horsham, PA; ARRIS Enterprises Inc. of Suwanee, GA (now ARRIS Enterprises LLC); and ARRIS Solutions, Inc. of Suwanee, GA (collectively, “ARRIS”). 81 FR at 33548; *see also* 82 FR 38934 (Aug. 16, 2017). The Office of Unfair Import Investigations is not a party to this investigation. 81 FR at 33548.

Prior to the evidentiary hearing, Rovi withdrew its allegations as to certain patent claims. *See* Order No. 17 (Sept. 23, 2016), *unreviewed*, Comm’n Notice (Oct. 21, 2016); Order No. 25 (Nov. 14, 2016), *unreviewed*, Comm’n Notice (Dec. 2, 2016); Order No. 27 (Dec. 5, 2016), *unreviewed*, Comm’n Notice (Dec. 28, 2016). Rovi proceeded at the evidentiary hearing on the following patents and claims: claims 7, 18, and 40 of the ’556 patent; claims 1, 2, 14, and 17 of the ’263 patent; claims 1, 5, 10, and 15 of the ’801 patent; claims 12, 17, and 18 of the ’871 patent; claims 1, 3, 5, 9, 10, 14, and 18 of the ’413 patent; and claims 1, 10, 13, and 22 of the ’512 patent.

On May 26, 2017, the administrative law judge (the “ALJ”) issued the final initial determination (the “Final ID”), which finds a violation of section 337 by Respondents in connection with the asserted claims of the ’263 and ’413 patents. The Final ID finds no violation of section 337 in connection with the asserted claims of the ’556, ’801, ’871, and ’512 patents. The ALJ recommended that, subject to any public interest determinations of the Commission, the Commission should issue an LEO directed to certain accused products, that CDOs issue to Respondents, and that the Commission should not require any bond during the Presidential review period (*see* 19 U.S.C. 1337(j)).

On June 12, 2017, Rovi and Respondents filed with the Commission petitions for review of the Final ID. Respondents petitioned thirty-two of the Final ID’s conclusions, and Rovi petitioned seven of the Final ID’s conclusions. On June 20, 2017, the parties filed responsive submissions. On July 11, 2017, Rovi and Respondents filed statements on the public interest. The Commission also received and considered numerous comments on the public interest from non-parties. On July 5, 2017, Rovi and the ARRIS respondents filed a Joint Unopposed Motion for, and Memorandum in Support of, Leave to Amend the Complaint and Notice of Investigation to Correct Corporate Names of Two ARRIS Respondents. The motion indicated that ARRIS Enterprises, Inc. has changed its name to ARRIS Enterprises LLC and that Pace Ltd. has changed its name to ARRIS Global Ltd. And, on July 25, 2017, Comcast submitted with the Office of the Secretary a letter including supplemental disclosure and representations. On July

31, 2017, Rovi submitted with the Office of the Secretary a response thereto. On August 9, 2017, Comcast filed a response to Rovi's submission.

On August 10, 2017, and after having reviewed the record, including the petitions and responses thereto, the Commission determined to review the Final ID in part. 82 FR 38934-36 (Aug. 16, 2017) (the "Notice of Review"). In particular, the Commission determined to review the following:

- (1) The Final ID's determination that Comcast is an importer of the accused products (Issue 1 in Respondents' Petition for Review).
- (2) The Final ID's determination that Comcast has not sold accused products in the United States after the importation of those products into the United States (the issue discussed in section III of Rovi's Petition for Review).
- (3) The Final ID's determination that the accused Legacy products are "articles that infringe" (Issue 2 in Respondents' Petition for Review).
- (4) The issue of whether the X1 products are "articles that infringe" (Issue 3 in Respondents' Petition for Review), the issue of direct infringement of the '263 and '413 patents by the X1 accused products (Issue 5 in Respondents' Petition for Review), and the issue of "the nature and scope of the violation found" (the issue discussed in section X of Respondents' Petition for Review).
- (5) The issue of whether Comcast's two alternative designs infringe the '263 and '413 patents (Issue 4 in Respondents' Petition for Review).
- (6) The Final ID's claim construction of "cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation" in the '512 patent, and the Final ID's infringement determinations as to that patent (Issue 26 in Respondents' Petition for Review).
- (7) The Final ID's conclusion that the asserted claims of the '512 patent are invalid as obvious (the issue discussed in section VI.B.4 of Rovi's Petition for Review).
- (8) The issue of whether the ARRIS-Rovi Agreement provides a defense to the allegations against the ARRIS respondents (the issue discussed in section XI of Respondents' Petition for Review).
- (9) The Final ID's conclusion that Rovi did not establish the economic prong of the domestic industry requirement based on patent licensing (the issue discussed in section IV of Rovi's Petition for Review).

*Id.* at 38935. The Commission determined to not review the remainder of the Final ID. *Id.* The Commission additionally concluded that Respondents' petition of certain issues decided in the Final ID was improper, and therefore, those assignments of error were waived. *Id.* In the Notice of Review, the Commission also granted the motion to correct the corporate names of two of the respondents and determined to reopen the evidentiary record and accept the supplemental disclosure, response thereto, and reply to the response. *Id.* at 38934-35. The Commission requested briefing on some of the issues under review and also on remedy, the public interest, and bonding. *Id.* at 38935-36.

On August 23, 2017, Respondents filed a Petition for Reconsideration of the Commission's Determination of Waiver as to Certain Issues Specified in Respondents' Petition for Review or, Alternatively, Application of Waiver to Issues Raised in Rovi's Petition for Review. On August 30, 2017, Rovi filed a response thereto. The Commission has determined to deny that petition.

On August 24, 2017, Rovi and Respondents filed their written submissions on the issues under review and on remedy, public interest, and bonding, and on August 31, 2017, the parties filed their reply submissions.

Having examined the record in this investigation, the Commission has determined to affirm the Final ID's conclusion that Comcast has violated section 337 in connection with the asserted claims of the '263 and '413 patents.

The Commission has determined to affirm the Final ID in part, affirm the Final ID with modifications in part, reverse the Final ID in part, vacate the Final ID in part, and take no position as to certain issues under review. More particularly, the Commission affirms the Final ID's determination that Comcast imports the accused X1 set-top boxes ("STBs"), and takes no position as to whether Comcast is an importer of the Legacy STBs. The Commission also takes no position on as to whether Comcast sells the accused products after importation.

The Commission concludes that there is no section 337 violation as to the Legacy STBs. Regarding the X1 STBs, the Commission affirms the Final ID's conclusion that Comcast's customers directly infringe the '263 and '413 patents. Thus, the Commission affirms the Final ID's conclusion that complainant Rovi has established a violation by Comcast as to those patents and the X1 STBs.

The Commission also takes the following actions. The Commission vacates the Final ID's conclusion that Comcast's two alternative designs infringe the '263 and '413 patents and instead concludes that those designs are too hypothetical to adjudicate at this time. The Commission modifies and affirms the Final ID's claim construction of the claim term "cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation" in the '512 patent and affirms the Final ID's infringement determinations as to that patent. The Commission modifies and affirms the Final ID's conclusion that the asserted claims of the '512 patent are invalid as obvious. The Commission takes no position as to whether the ARRIS-Rovi Agreement provides a defense to the allegations against ARRIS, and as to whether Rovi established the economic prong of the domestic industry requirement based on patent licensing. The Commission adopts the remainder of the Final ID to the extent that it does not

conflict with the Commission's opinion or to the extent it is not expressly addressed in the Commission's opinion.

Having found a violation of section 337 in this investigation by Comcast with respect to the '263 and '413 patents, the Commission has determined that the appropriate form of relief is (1) a LEO, that subject to certain exceptions provided therein, prohibits the unlicensed entry of certain digital video receivers and hardware and software components thereof that infringe one or more of claims 1, 2, 14, and 17 of the '263 patent and claims 1, 3, 5, 9, 10, 14, and 18 of the '413 patent that are manufactured by, or on behalf of, or are imported by or on behalf of Comcast or any of its affiliated companies, parents, subsidiaries, agents, or other related business entities, or their successors or assigns; and (2) CDOs that, subject to certain exceptions provided therein, prohibit Comcast 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 imported covered products; and aiding or abetting other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

The Commission has also determined that the public interest factors enumerated in section 337(d) and (f) (19 U.S.C. 1337(d) and (f)) do not preclude issuance of the LEO or CDOs. Finally, the Commission has determined that the excluded digital video receivers and hardware and software components thereof may be imported and sold in the United States during the period of Presidential review with the posting of a bond in the amount of zero percent of the entered value of the infringing goods (*i.e.*, no bond). The Commission's orders and opinion were delivered to the President and to 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.

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: November 21, 2017

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

**Inv. No. 337-TA-1001**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served upon the following parties as indicated on **November 21, 2017**.



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

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

Benjamin Levi, Esq.  
**McKOOL SMITH, P.C.**  
1999 K Street, N.W., Suite 6300  
Washington, DC 20006

- ☐ 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:**

Thomas L. Jarvis, Esq.  
**WINSTON & STRAWN LLP**  
1700 K Street, NW  
Washington, DC 20006-3817

- ☐ Via Hand Delivery  
☒ Via Express Delivery  
☐ Via First Class Mail  
☐ Other: \_\_\_\_\_

**On Behalf of Respondents Arris International plc, Arris  
Group Inc., Arris Technology, Inc., Arris Enterprises Inc.,  
Arris Solutions, Inc., Pace Ltd., and Pace Americas, LLC:**

Joshua B. Pond, Esq.  
**KILPATRICK TOWNSEND & STOCKTON LLP**  
607 14<sup>th</sup> Street, NW, Suite 900  
Washington, DC 20005

- ☐ Via Hand Delivery  
☒ Via Express Delivery  
☐ Via First Class Mail  
☐ Other: \_\_\_\_\_

**On Behalf of Respondents Technicolor SA, Technicolor USA,  
Inc., and Technicolor Connected Home USA LLC:**

Paul M. Bartkowski, Esq.  
**ADDUCI, MASTRIANI & SCHAUMBERG LLP**  
1133 Connecticut Avenue, NW, 12<sup>th</sup> Floor  
Washington, DC 20036

- ☐ 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 HARDWARE AND  
SOFTWARE COMPONENTS THEREOF**

**Investigation No. 337-TA-1001**

**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 hardware and software components thereof covered by one or more of claims 1, 2, 14, and 17 of United States Patent No. 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.

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, 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 covered digital video receivers and hardware and software components thereof 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 (*i.e.*, no bond).

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

1. 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. 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<sup>1</sup> to the extent they import such products on behalf of Respondents, 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 terms of U.S. Patent Nos. 8,006,263 and 8,578,413, 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.
2. Notwithstanding paragraph 1 of this Order, the aforesaid digital video receivers and hardware and software components thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign trade zone, or withdrawal

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<sup>1</sup> 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.

from a warehouse for consumption, under bond in the amount of zero percent of the entered value (*i.e.*, no bond) of the imported digital video receivers and hardware and software components thereof 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 action is approved or disapproved 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 capable of being used after importation in a manner which infringes the claims of the patents that are the subject of this Order because one or more elements (such as software elements) of the internet communications path described by the claims of the patents in paragraph 1 of this Order are omitted from the internet communications path that the imported products will use after importation. 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 hardware and software components thereof 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 Rule 210.76 of the Commission's Rules of Practice and Procedure (19 CFR 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.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton'.

Lisa R. Barton  
Secretary to the Commission

Issued: November 21, 2017

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

**Inv. No. 337-TA-1001**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **ORDER, COMMISSION** has been served upon the following parties as indicated on **November 21, 2017**.



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

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

Benjamin Levi, Esq.  
**McKOOL SMITH, P.C.**  
1999 K Street, N.W., Suite 6300  
Washington, DC 20006

- ☐ 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:**

Thomas L. Jarvis, Esq.  
**WINSTON & STRAWN LLP**  
1700 K Street, NW  
Washington, DC 20006-3817

- ☐ Via Hand Delivery  
☒ Via Express Delivery  
☐ Via First Class Mail  
☐ Other: \_\_\_\_\_

**On Behalf of Respondents Arris International plc, Arris  
Group Inc., Arris Technology, Inc., Arris Enterprises Inc.,  
Arris Solutions, Inc., Pace Ltd., and Pace Americas, LLC:**

Joshua B. Pond, Esq.  
**KILPATRICK TOWNSEND & STOCKTON LLP**  
607 14<sup>th</sup> Street, NW, Suite 900  
Washington, DC 20005

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☐ Other: \_\_\_\_\_

**On Behalf of Respondents Technicolor SA, Technicolor USA,  
Inc., and Technicolor Connected Home USA LLC:**

Paul M. Bartkowski, Esq.  
**ADDUCI, MASTRIANI & SCHAUMBERG LLP**  
1133 Connecticut Avenue, NW, 12<sup>th</sup> Floor  
Washington, DC 20036

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☐ Other: \_\_\_\_\_

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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT RESPONDENT Comcast Business**

**Communications, LLC**, One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103 ("Respondent"), 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 hardware and software components thereof covered by (1) one or more of claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) one or more of claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; ("the Asserted Patents") 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 and Rovi Guides, Inc., both of San Carlos, CA.
- (C) "Respondent" shall mean Comcast Business Communications, LLC, One Comcast Center, 1701 John F. Kennedy Blvd., 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 hardware and software components thereof covered by one or more of (1) claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of certain claims of the Asserted Patents.

## **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, 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 terms of the Asserted Patents, 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**

Notwithstanding any other provision of this Order, Respondent shall be permitted:

- (A) to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of the Asserted Patents 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, 2017. 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 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1001") in a prominent place on the cover pages and/or the first page. (See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)). Persons with questions regarding filing should contact the Office of 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 Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. 1001.

## **VI. Recordkeeping 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

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports associated with this order. The designated attorney must be on the protective order entered in the investigation.

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 this Order.

## **VII.**

### **Service of Cease and Desist Order**

Respondent is ordered and directed to:

- (A) Serve, within fifteen 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 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 the Asserted Patents expire.

### **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 CFR 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 CFR 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 CFR 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 (*i.e.*, no bond). 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 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 CFR 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 any accompanying documentation on Complainants' counsel.<sup>2</sup>

The bond is to be forfeited in the event that the United States Trade Representative

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<sup>2</sup> *See* Footnote 1.

approves this Order (or does not disapprove it 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.

By order of the Commission.

A handwritten signature in black ink, appearing to read "Lisa R. Barton".

Lisa R. Barton  
Secretary to the Commission

Issued: November 21, 2017

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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT RESPONDENT Comcast Cable**

**Communications, LLC**, One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103 (“Respondent”), 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 hardware and software components thereof covered by (1) one or more of claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) one or more of claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; (“the Asserted Patents”) 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 and Rovi Guides, Inc., both of San Carlos, CA.
- (C) "Respondent" shall mean Comcast Cable Communications, LLC, One Comcast Center, 1701 John F. Kennedy Blvd., 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 hardware and software components thereof covered by one or more of (1) claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of certain claims of the Asserted Patents.

## **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, 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 terms of the Asserted Patents, 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**

Notwithstanding any other provision of this Order, Respondent shall be permitted:

- (A) to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of the Asserted Patents 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, 2017. 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 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1001") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)*). Persons with questions regarding filing should contact the Office of 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 Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. 1001.

## **VI. Recordkeeping 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

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports associated with this order. The designated attorney must be on the protective order entered in the investigation.

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 this Order.

## **VII.**

### **Service of Cease and Desist Order**

Respondent is ordered and directed to:

- (A) Serve, within fifteen 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 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 the Asserted Patents expire.

### **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 CFR 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 CFR 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 CFR 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 (*i.e.*, no bond). 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 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 CFR 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 any accompanying documentation on Complainants' counsel.<sup>2</sup>

The bond is to be forfeited in the event that the United States Trade Representative

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<sup>2</sup> *See* Footnote 1.

approves this Order (or does not disapprove it 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.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton'.

Lisa R. Barton  
Secretary to the Commission

Issued: November 21, 2017

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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT RESPONDENT Comcast Cable**

**Communications Management, LLC**, One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103 (“Respondent”), 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 hardware and software components thereof covered by (1) one or more of claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) one or more of claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; (“the Asserted Patents”) 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 and Rovi Guides, Inc., both of San Carlos, CA.
- (C) "Respondent" shall mean Comcast Cable Communications Management, LLC, One Comcast Center, 1701 John F. Kennedy Blvd., 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 hardware and software components thereof covered by one or more of (1) claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of certain claims of the Asserted Patents.

## **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, 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 terms of the Asserted Patents, 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**

Notwithstanding any other provision of this Order, Respondent shall be permitted:

- (A) to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of the Asserted Patents 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, 2017. 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 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1001") in a prominent place on the cover pages and/or the first page. (See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)). Persons with questions regarding filing should contact the Office of 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 Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. 1001.

## **VI. Recordkeeping 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

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports associated with this order. The designated attorney must be on the protective order entered in the investigation.

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 this Order.

## **VII.**

### **Service of Cease and Desist Order**

Respondent is ordered and directed to:

- (A) Serve, within fifteen 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 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 the Asserted Patents expire.

### **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 CFR 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 CFR 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 CFR 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 (*i.e.*, no bond). 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 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 CFR 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 any accompanying documentation on Complainants' counsel.<sup>2</sup>

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<sup>2</sup> *See* Footnote 1.

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it 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.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton'.

Lisa R. Barton  
Secretary to the Commission

Issued: November 21, 2017

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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT RESPONDENT Comcast Corporation**, One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103 (“Respondent”), 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 hardware and software components thereof covered by (1) one or more of claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) one or more of claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; (“the Asserted Patents”) 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 and Rovi Guides, Inc., both of San Carlos, CA.
- (C) “Respondent” shall mean Comcast Corporation, One Comcast Center, 1701 John F. Kennedy Blvd., 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 hardware and software components thereof covered by one or more of (1) claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of certain claims of the Asserted Patents.

## **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, 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 terms of the Asserted Patents, 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**

Notwithstanding any other provision of this Order, Respondent shall be permitted:

- (A) to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of the Asserted Patents 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, 2017. 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 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1001") in a prominent place on the cover pages and/or the first page. (See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)). Persons with questions regarding filing should contact the Office of 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 Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. 1001.

## **VI. Recordkeeping 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

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports associated with this order. The designated attorney must be on the protective order entered in the investigation.

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 this Order.

## **VII. Service of Cease and Desist Order**

Respondent is ordered and directed to:

- (A) Serve, within fifteen 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 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 the Asserted Patents expire.

### **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 CFR 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 CFR 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

CFR 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 (*i.e.*, no bond). 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 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 CFR 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 any accompanying documentation on Complainants' counsel.<sup>2</sup>

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it within the review period), unless the U.S. Court of

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<sup>2</sup> *See* Footnote 1.

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.

By order of the Commission.

A handwritten signature in black ink, appearing to read "Lisa R. Barton".

Lisa R. Barton  
Secretary to the Commission

Issued: November 21, 2017



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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT RESPONDENT Comcast Holdings Corporation**, One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103 ("Respondent"), 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 hardware and software components thereof covered by (1) one or more of claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) one or more of claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; ("the Asserted Patents") 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 and Rovi Guides, Inc., both of San Carlos, CA.
- (C) "Respondent" shall mean Comcast Holdings Corporation, One Comcast Center, 1701 John F. Kennedy Blvd., 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 hardware and software components thereof covered by one or more of (1) claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of certain claims of the Asserted Patents.

## **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, 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 terms of the Asserted Patents, 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**

Notwithstanding any other provision of this Order, Respondent shall be permitted:

- (A) to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of the Asserted Patents 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, 2017. 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 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1001") in a prominent place on the cover pages and/or the first page. (See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)). Persons with questions regarding filing should contact the Office of 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 Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. 1001.

## **VI. Recordkeeping 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

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports associated with this order. The designated attorney must be on the protective order entered in the investigation.

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 this Order.

## **VII.**

### **Service of Cease and Desist Order**

Respondent is ordered and directed to:

- (A) Serve, within fifteen 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 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 the Asserted Patents expire.

### **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 CFR 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 CFR 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 CFR 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 (*i.e.*, no bond). 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 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 CFR 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 any accompanying documentation on Complainants' counsel.<sup>2</sup>

The bond is to be forfeited in the event that the United States Trade Representative

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<sup>2</sup> *See* Footnote 1.



approves this Order (or does not disapprove it 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.

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: November 21, 2017

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

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT RESPONDENT Comcast Shared Services, LLC,** 330 N. Wabash Ave. 22, Chicago, IL 60611-3586 ("Respondent"), 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 hardware and software components thereof covered by (1) one or more of claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) one or more of claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; ("the Asserted Patents") 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 and Rovi Guides, Inc., both of San Carlos, CA.
- (C) “Respondent” shall mean Comcast Shared Services, LLC, 330 N. Wabash Ave. 22, Chicago, IL 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 hardware and software components thereof covered by one or more of (1) claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; or (2) claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of certain claims of the Asserted Patents.

## **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, 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 terms of the Asserted Patents, 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**

Notwithstanding any other provision of this Order, Respondent shall be permitted:

- (A) to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of the Asserted Patents 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, 2017. 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 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1001") in a prominent place on the cover pages and/or the first page. (See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)). Persons with questions regarding filing should contact the Office of 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 Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. 1001.

## **VI. Recordkeeping 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

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports associated with this order. The designated attorney must be on the protective order entered in the investigation.

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 this Order.

## **VII.**

### **Service of Cease and Desist Order**

Respondent is ordered and directed to:

- (A) Serve, within fifteen 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 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 the Asserted Patents expire.

### **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 CFR 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 CFR 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



CFR 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 (*i.e.*, no bond). 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 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 CFR 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 any accompanying documentation on Complainants' counsel.<sup>2</sup>

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it within the review period), unless the U.S. Court of

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<sup>2</sup> *See* Footnote 1.

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.

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: November 21, 2017

**PUBLIC VERSION**

**UNITED STATES INTERNATIONAL TRADE COMMISSION**

**Washington, D.C.**

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**COMMISSION OPINION**

This investigation is before the Commission for a final determination on the issues under review, and to determine the appropriate remedy, the public interest, and bonding. The Commission has determined to affirm that respondent Comcast violated section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337) ("section 337"), in connection with claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263 ("the '263 patent") and claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413 ("the '413 patent").

The Commission has determined to affirm the final initial determination (the "Final ID") in part, affirm the Final ID with modifications in part, reverse the Final ID in part, vacate the Final ID in part, and take no position as to certain issues under review. More particularly, the Commission affirms the Final ID's determination that Comcast imports the accused X1 set-top boxes ("STBs"), and takes no position as to whether Comcast is an importer of the Legacy STBs. The Commission also takes no position on whether Comcast sells the accused products after importation.

The Commission concludes that there is no section 337 violation as to the Legacy STBs. Regarding the X1 STBs, the Commission affirms the Final ID's conclusion that Comcast's

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customers directly infringe the '263 and '413 patents. Thus, the Commission affirms the Final ID's conclusion that complainant Rovi has established a violation by Comcast as to those patents and the X1 STBs.

The Commission also takes the following actions. The Commission vacates the Final ID's conclusion that Comcast's two alternative designs infringe the '263 and '413 patents and instead concludes that those designs are too hypothetical to adjudicate at this time. The Commission modifies and affirms the Final ID's claim construction of the claim term "cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation" in U.S. Patent No. 8,621,512 ("the '512 patent") and affirms the Final ID's infringement determinations as to that patent. The Commission modifies and affirms the Final ID's conclusion that the asserted claims of the '512 patent are invalid as obvious. The Commission takes no position as to whether the ARRIS-Rovi Agreement provides a defense to the allegations against ARRIS, and as to whether Rovi established the economic prong of the domestic industry requirement based on patent licensing. The Commission adopts the remainder of the Final ID to the extent that it does not conflict with this opinion or to the extent it is not expressly addressed in this opinion.

Having found a violation of section 337 in this investigation by Comcast, the Commission has determined that the appropriate form of relief is a limited exclusion order ("LEO") and cease and desist orders ("CDOs"). The Commission has determined to issue an LEO as to Comcast's infringing digital video receivers and hardware and software components thereof. The CDOs prohibit, among other things, the importation, sale, and distribution of infringing products by Comcast.

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The Commission has also determined that the public interest factors enumerated in sections 337(d) and (f) do not preclude issuance of the orders. Finally, the Commission has determined that a bond in the amount of zero (*i.e.*, no bond) is required to permit temporary importation and sale during the period of Presidential review (19 U.S.C. 1337(d)) of digital video receivers and hardware and software components thereof that are subject to the orders.

### **I. BACKGROUND**

#### **A. Procedural History**

##### **1. Institution**

The Commission instituted this investigation on May 26, 2016, based on a complaint filed on behalf of Rovi Corporation and Rovi Guides, Inc. (collectively, “Rovi”), both of San Carlos, California. 81 FR 33547, 33547 (May 26, 2016) (the “Notice of Investigation”). The complaint, as amended, alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, by reason of infringement of certain claims of U.S. Patent Nos. 8,006,263 (“the ’263 patent”); 8,578,413 (“the ’413 patent”); 8,046,801 (“the ’801 patent”); 8,621,512 (“the ’512 patent”); 8,768,147 (“the ’147 patent”); 8,566,871 (“the ’871 patent”); and 6,418,556 (“the ’556 patent”). *Id.* at 33547-48. The complaint further alleges that a domestic industry exists. *Id.* at 33548.

The Notice of Investigation named sixteen respondents. The respondents are Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; Comcast Shared Services, LLC (collectively “Comcast”); Technicolor SA; Technicolor USA, Inc.; Technicolor Connected Home USA LLC (collectively “Technicolor”); ARRIS International plc; ARRIS Group Inc.; ARRIS Technology, Inc.; ARRIS Enterprises LLC; ARRIS Solutions, Inc.; ARRIS Global Ltd., and Pace Americas, LLC (collectively, “ARRIS”)

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(all respondents collectively, the “Respondents”). Notice of Investigation, 81 FR at 33548; *see also* 82 FR 38934-36 (Aug. 16, 2017) (the “Notice of Review”). The Office of Unfair Import Investigations is not a party to this investigation. *See* Notice of Investigation, 81 FR at 33548.

### 2. Non-Final Initial Determinations

On October 21, 2016, the Commission determined not to review an initial determination (“ID”) terminating the investigation as to claims 5, 6, 8, 9, 11, 12, and 18 of the ’263 patent; claims 6-8, 12, and 15-17 of the ’413 patent; claims 2-4, 6-9, 11-14, 16-27, and 29-54 of the ’801 patent; claims 4, 8, 9, 11, 12, 16, 20, 21, 23, and 24 of the ’512 patent; claims 5, 6, 8, 10, 15, 21, 22, and 24 of the ’147 patent; claims 2, 4, 10, 11, 13, 16, 19-22, 24, 26, 28, 30, 33, 35, 36, and 39 of the ’556 patent; and claims 1, 2, 6-11, 13, 19-22, 24, and 30-33 of the ’871 patent.<sup>1</sup> On December 2, 2016, the Commission determined not to review an ID terminating the investigation as to claim 15 of the ’263 patent; claim 28 of the ’801 patent; claims 2, 3, 14, and 15 of the ’512 patent; claim 16 of the ’147 patent; claims 3, 12, and 14 of the ’556 patent; and claims 23, 28, and 29 of the ’871 patent.<sup>2</sup> On December 28, 2016, the Commission determined not to review an ID terminating the investigation as to all infringement allegations with respect to the ’147 patent.<sup>3</sup>

For sake of clarity regarding the effect of the non-final IDs, the table below presents the remaining claims (and purposes thereof).

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<sup>1</sup> Order No. 17 (Sept. 23, 2016), *unreviewed*, Comm’n Notice (Oct. 21, 2016).

<sup>2</sup> Order No. 25 (Nov. 14, 2016), *unreviewed*, Comm’n Notice (Dec. 2, 2016).

<sup>3</sup> Order No. 27 (Dec. 5, 2016), *unreviewed*, Comm’n Notice (Dec. 28, 2016).

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Patent	Infringement		Domestic Industry (Technical Prong)
	<i>XI STBs</i>	<i>Legacy STBs</i>	
'556	7, 18, 40	7, 18, 40	7, 18, 40
'263	1, 2, 14, 17	1, 2, 14, 17	1, 2, 14, 17
'801	1, 5, 10, 15	1, 5, 10, 15	1, 5, 10, 15
'871	12, 17, 18	(none)	12, 13, 17, 18
'413	1, 3, 5, 9, 10, 14, 18	1, 3, 5, 9, 10, 14, 18	1, 3, 5, 9, 10, 14, 18
'512	1, 10, 13, 22	1, 10, 13, 22	1, 10, 13, 22

### 3. The Final ID, Petitions Thereof, and the Recommended Determination

On May 26, 2017, the ALJ issued the Final ID, which concludes with forty-nine conclusions of fact and law (abbreviated herein as “COFL”). Final ID at 610-13. The Final ID finds a violation of section 337 in connection with the asserted claims of the '263 and '413 patents, but not in connection with the asserted claims of the '556, '801, '871, and '512 patents. Specifically, the Final ID finds that the Commission has subject matter jurisdiction over the allegations in the complaint, *in rem* jurisdiction over the accused products, and *in personam* jurisdiction over Respondents. Final ID at 610. The Final ID finds that Comcast, ARRIS, and Technicolor import the accused products, but that Comcast does not sell accused products for or after importation. *Id.* at 9-14.

On June 9, 2017, the ALJ issued his Recommendation on Remedy and Bond (the “RD”).

The RD declares that,

subject to any public interest determination of the Commission, the Commission should: (1) issue a [LEO] covering products that infringe one or more of the claims as to which a violation of section 337 has been found; (2) issue [CDOs]; and (3) require no bond during the Presidential review period.

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RD at 1.

### 4. The Commission's Review of the Final ID

On June 12, 2017, Rovi and Respondents each filed a petition for review of the Final ID, each challenging a number of the Final ID's findings and conclusions.<sup>4</sup> On August 10, 2017, the Commission determined to review some of the petitioned issues. Notice of Review, 82 FR at 38934-36. Specifically, the Commission determined to review the following issues:

- (1) The Final ID's determination that Comcast is an importer of the accused products (Issue 1 in Respondents' Petition for Review).
- (2) The Final ID's determination that Comcast has not sold accused products in the United States after the importation of those products into the United States (the issue discussed in section III of Rovi's Petition for Review).
- (3) The Final ID's determination that the accused Legacy products are "articles that infringe" (Issue 2 in Respondents' Petition for Review).
- (4) . . . [W]hether the X1 products are "articles that infringe" (Issue 3 in Respondents' Petition for Review), the issue of direct infringement of the '263 and '413 patents by the X1 accused products (Issue 5 in Respondents' Petition for Review), and the issue of "the nature and scope of the violation found" (the issue discussed in section X of Respondents' Petition for Review).
- (5) . . . [W]hether Comcast's two alternative designs infringe the '263 and '413 patents (Issue 4 in Respondents' Petition for Review).
- (6) The Final ID's claim construction of "cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation" in the '512 patent, and the Final ID's infringement determinations as to that patent (Issue 26 in Respondents' Petition for Review).

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<sup>4</sup> Rovi's and Respondents' petitions for review of the Final ID are cited herein as "Rovi Pet." and "Resps. Pet.," respectively; and Rovi's and Respondents' replies to the other's petitions are cited herein as "Rovi Pet. (Reply)" and "Resps. Pet. (Reply)," respectively. The parties' separately-filed summaries of their petitions and/or replies are denoted herein with "(Summary)."



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(7) The Final ID's conclusion that the asserted claims of the '512 patent are invalid as obvious (the issue discussed in section VI.B.4 of Rovi's Petition for Review).

(8) . . . [W]hether the ARRIS-Rovi Agreement provides a defense to the allegations against the ARRIS respondents (the issue discussed in section XI of Respondents' Petition for Review).

(9) The Final ID's conclusion that Rovi did not establish the economic prong of the domestic industry requirement based on patent licensing (the issue discussed in section IV of Rovi's Petition for Review).

*Id.* at 389345. The Commission requested briefing on certain topics. The Commission further concluded that certain of Respondents' assignments of error were waived:

The Commission has further determined that Respondents' petition of the Final ID's determinations is improper as to the following issues: (1) The representative accused X1 products for the '263, '413, and '801 patents; (2) the induced infringement of the '263 and '413 patents; and (3) the eligibility under 35 U.S.C. 101 of the '512 patent. *See* 19 CFR 210.43(b)(2) ("Petitions for review may not incorporate statements, issues, or arguments by reference."). Those assignments of error are therefore waived.

*Id.* On August 24, 2017, Rovi and Respondents filed their written submissions on the issues under review and on remedy, public interest, and bonding, and on August 31, 2017, the parties filed their reply submissions.<sup>5</sup>

On August 23, 2017, Respondents filed a "Petition for Reconsideration of the Commission's Determination of Waiver as to Certain Issues Specified in Respondents' Petition for Review or, Alternatively, Application of Waiver to Issues Raised in Rovi's Petition for Review," challenging the Commission's finding of waiver as to the three issues noted above.

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<sup>5</sup> Rovi's and Respondents' initial submissions are cited herein as "Rovi Br." and "Resps. Br.," respectively, and the parties' reply submissions are cited herein as "Rovi Br. (Reply)" and "Resps. Br. (Reply)," respectively.

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On August 30, 2017, Rovi filed a response thereto. Based on the conclusory assertions and incorporation of post-hearing briefing in Respondents' petition for review, Respondents waived their arguments and failed to demonstrate that any finding or conclusion of material fact was clearly erroneous; that any legal conclusion was erroneous, without governing precedent, rule or law, or constitutes an abuse of discretion; or that any issue is one affecting Commission policy. 19 CFR 210.43(b)(1)-(b)(2). Accordingly, we have found the issues waived, and have adopted the ALJ's findings on these issues.

### **B. Patents Related to the Issues under Review**

#### **1. The '263 and '413 Patents—the “Remote Access Patents”**

The '263 and '413 patents are each titled “Interactive television program guide with remote access.” The '263 patent issued on August 23, 2011, and the '413 patent issued on November 5, 2013. JX-0002 ('263 patent), at cover page; JX-0005 ('413 patent), at cover page. Respondents refer to the '263 and '413 patents as the “Remote Access Patents.” *See* Final ID at 178. Each Remote Access Patent claims the benefit of U.S. Provisional Application Nos: 60/097,527, filed August 21, 1998, and 60/093,292, filed July 17, 1998. JX-0002 ('263 patent), at cover page; JX-0005 ('413 patent), at cover page. Each of the Remote Access Patents shares essentially the same specification. *See generally* JX-0002 ('263 patent); JX-0005 ('413 patent), at cover page; *see also* Rovi Post-Hrg. Br.<sup>6</sup> at 41 (explaining that the patents “stem from a common, parent application filed on July 16, 1999”). The Remote Access Patents relate to

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<sup>6</sup> “Rovi Post-Hrg. Br.” refers to the Rovi’s post-hearing brief, which was filed with the ALJ. Respondents’ post-hearing brief is similarly abbreviated as “Resps. Post-Hrg. Br.,” and the parties’ reply post-hearing briefing is cited as “Rovi Post-Hrg. Br. (Reply)” or “Resps. Post-Hrg. Br. (Reply),” respectively.

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interactive television guide programs (“IPGs”) that operate on local devices, such as STBs, and remote devices, such as a laptops or mobile phones. *See* JX-0002 (’263 patent), at Abstract; JX-0005 (’413 patent), at Abstract; *see also* Final ID at 178, 281.

### **2. The ’512 Patent**

The ’512 patent, titled “Interactive television program guide with simultaneous watch and record capabilities,” issued on December 31, 2013, and claims the benefit of several applications, the earliest of which is U.S. Provisional Application No. 60/089,487, filed on June 16, 1998. JX-0006 (’512 patent), at cover page. The ’512 patent discloses a television guide that allows a user to record a program while simultaneously watching another program. *Id.*

### **C. Products at Issue**

#### **1. The Accused Products**

The accused products are STBs (and their ancillary remote controls and applications) that Comcast supplies to customers to enable their television viewing experience. *See, e.g.,* Final ID at 7. These products are capable of supporting one of two software-based guides supplied by Comcast to its customers: the X1 Guide or the Legacy Guide. Regarding the differences between the X1 Guide and the Legacy Guide, the Legacy STBs locally store and execute the IPG<sup>7</sup> software and programming scheduling data “on the box,” and the new X1 STBs receive IPG screen views from the “cloud.” *See, e.g., id.* at 220.

In view of certain licensing agreements at issue in this investigation, Rovi declares that it

accuses all digital video receivers and hardware and software components thereof, including all products capable of supporting Comcast’s X1 or

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<sup>7</sup> An IPG allows, for example, a person viewing a television to select channels for viewing or recording.

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Legacy Guide, that are or were: (1) products purchased by Comcast on or after April 1, 2016<sup>8</sup>, regardless of when they were imported; (2) products installed by Comcast into its customer base on or after April 1, 2016, regardless of when they were purchased by Comcast or imported; and (3) products that Comcast now holds in inventory and that Comcast will, in the normal course of business, install into Comcast's customer base on or after April 1, 2016, regardless of when they were purchased by Comcast or imported.

Rovi Post-Hrg. Br. at 10. Rovi further accuses

all Technicolor and ARRIS products capable of supporting Comcast's X1 or Legacy Guide, that are or were: (1) products imported on or after April 1, 2016 and sold to Comcast; (2) products sold to Comcast on or after April 1, 2016, regardless of when they were imported; and (3) products that Technicolor or ARRIS hold in inventory for sale to Comcast, regardless of when they were imported. The foregoing includes remote controls and applications that operate in conjunction with any of the identified models.

*Id.* at 10-11.

### **2. The Domestic Industry Products**

The domestic industry products in this investigation are Rovi's i-Guide, Passport, and TotalGuide XD systems. Final ID at 576.

## **II. ISSUES UNDER REVIEW**

### **A. Whether Comcast Has Imported or Sold Infringing Products after the Importation into the United States**

#### **1. The X1 STBs**

The Commission has determined to affirm the Final ID's findings and conclusion that Comcast imports the X1 STBs into the United States. The Commission has determined to take no position as to whether Comcast has sold the X1 STBs in the United States after the

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<sup>8</sup> April 1, 2016, is the day after patent and software licenses between Rovi (licensor) and Comcast (licensee) expired.

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importation of those products into the United States. *See Beloit Corp. v. Valet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984).

### **2. The Legacy STBs**

As discussed below, the Commission has determined that Rovi cannot establish a violation based on any unfair act related to the Legacy STBs. The Commission has thus determined to take no position as to whether Comcast has imported or sold the Legacy STBs after the importation into the United States. *See Beloit*, 742 F.2d at 1423.

### **B. Whether Rovi Established a Violation as to the Legacy STBs**

#### **1. The Applicable Law**

“An express or implied license is a defense to infringement.” *Radar Indus., Inc. v. Cleveland Die & Mfg. Co.*, 424 F. App’x 931, 933 (Fed. Cir. 2011). “The burden of proving that an implied license exists is on the party asserting an implied license as a defense to infringement.” *Augustine Med, Inc. v. Progressive Dynamics, Inc.*, 194 F.3d 1367, 1370 (Fed. Cir. 1999). “The longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item.” *Quanta Computer Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 625, 128 S.Ct. 2109, 170 L.Ed.2d 996 (2008).

#### **2. The Final ID**

The Final ID concludes that “[t]he accused Legacy products infringe claims 1, 2, 14, and 17 of [the ’263 patent]; claims 1, 3, 5, 9, 10, 14, and 18 of [the ’413 patent]; and claims 1, 10, 13, and 22 of U.S. Patent No. 8,621,512.” Final ID at 611. However, the Final ID finds no violation by Comcast with respect to the Legacy STBs based on a 2010 Patent License between Rovi and Comcast. *Id.* at 553-54. Relevant to the Legacy STBs and regarding Comcast’s licensing defense, the Final ID declares,

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The 2010 Patent License permits Comcast (and authorized third parties) to [ ] products that practice Rovi's Patents. Thus, the license expressly allows Comcast, along with its suppliers, to import products before April 1, 2016. Accordingly, . . . products imported before April 1, 2016 are not unlawful imports, and there has been no . . . unfair act which would constitute a violation [of] Section 337 for these products.

Final ID at 553-54 (footnote and citations omitted). [

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### 3. Commission Determination and Analysis

The Commission hereby supplements the Final ID with the following analysis. Rovi has not established a violation as to the Legacy STBs imported prior to the expiration of the license additionally because the sale of all Legacy STBs at issue that was authorized by Rovi exhausted Rovi's patent rights as to those products.

Patent exhaustion is generally triggered by a patentee's sale of an item or through a sale of that item that is authorized by the patentee (such as a sale by a licensee authorized by the patentee). *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1531, 1534-35 (2017); *see also Quanta*, 553 U.S. at 625 ("The longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item."); *see also Powertech Tech. Inc. v. Tessera, Inc.*, 660 F.3d 1301, 1307 (Fed. Cir. 2011); *LG Elecs. Inc. v. Hitachi Ltd.*, 655 F. Supp. 2d 1036, 1047-48 (N.D. Cal. 2009) (citing *U.S. v. Masonite Corp.*, 316 U.S. 265, 278 (1942)). Patent exhaustion

marks the point where patent rights yield to the common law principle against restraints on alienation. The Patent Act "promote[s] the progress of science and the useful arts by granting to [inventors] a limited monopoly" that allows them to "secure the financial rewards" for their inventions. [*Univis Lens, Co. v. U.S.*, 316 U.S., 241, 250 (1942)]. But once a patentee sells an item, it has "enjoyed all the rights secured" by that limited monopoly. *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 661, 15 S.Ct. 738, 39 L.Ed. 848 (1895). Because "the purpose of the

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patent law is fulfilled . . . when the patentee has received his reward for the use of his invention,” that law furnishes “no basis for restraining the use and enjoyment of the thing sold.” *Univis*, 316 U.S., at 251, 62 S.Ct. 1088.

*Impression Prods.*, 137 S. Ct. at 1531-32. “The patent exhaustion analysis focuses on the agreement to which the patent holder is a party” because “[o]nly that agreement reflects what the patent holder has bargained for” and “reflects the relevant transaction pursuant to which the patent holder contemplated sales of the patented items, whether through a direct licensee, or through a subsequent sublicensee.” *High Point Sarl v. T-Mobile USA, Inc.*, 53 F.Supp.3d 797, 803, 805 (D.N.J. 2014) (holding that sales by a sub-licensee were authorized by the patentee’s license agreement with the licensee for purposes of patent exhaustion), *aff’d per curiam*, 640 Fed. Appx. 917 (Fed. Cir. 2016) (unpublished).

Rovi granted Comcast an express license to

[

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JX-0050C, at § 1(b) (emphasis added). As shown above, the license agreement thus authorized Comcast to [ ] STBs. Also as shown above, that license agreement authorized [

]. See, e.g., RX-

0838C (Shank RWS) at QA28-29; ARRIS’s Resp. to the Complaint (June 30, 2016, Rule 210.13(b) Statement); Tr. 465-66, 469-71, 558; JX-0100C (Johnson Dep. Tr.) 48; RX-0781C

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(Folk RWS) at Q/A 50 ([ ]; Technicolor's Aug. 1, 2016, Supplemental Rule 210.13(b) Statement. Thus, focusing on the "license agreement to which the patent holder is a party," *see High Point*, 53 F.Supp.3d at 805, all sales of Legacy STBs were sales authorized by the license agreement [

]. Therefore, Rovi's patent rights have been exhausted as to those STBs, and none of the import, re-import,<sup>9</sup> or any alleged sale after importation of the Legacy STBs at issue can be the basis of a violation under section 337(a)(1)(B).<sup>10</sup>

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<sup>9</sup> After the ALJ issued the Final ID, Comcast submitted with the Office of the Secretary a letter including supplemental disclosures and representations, [

]. The Commission determined to reopen the evidentiary record and accept the supplemental disclosure and related submissions. *See* Notice of Review, 82 FR at 38934-35.

<sup>10</sup> Similarly, any alleged infringing conduct or unfair acts under section 337 regarding X1 STBs that were purchased and imported prior to the expiration of the license cannot serve as a basis of a violation under section 337(a)(1)(B). In *Quanta*, the Supreme Court considered whether exhaustion can apply when the sold article does not itself fully practice the asserted claims, such as if the claims are method claims. *See Quanta*, 553 U.S. at 628-35. There, the Court declared that exhaustion is triggered when the sold article has as its only reasonable and intended use to practice the patent and where the article embodies the essential features of the patented invention. *See Quanta*, 553 U.S. at 631-32 (citing *Univis*, 316 U.S., at 249-51).

The standard under *Quanta* is satisfied with respect to both the X1 and Legacy STBs. The Final ID's unreviewed finding declares that the Legacy STBs infringe the '263 and '413 patents, *see, e.g.*, Final ID at 611, and the Commission concludes (as discussed below) that the X1 STBs infringe the '263 and '413 patents. Furthermore, "the accused products are so tailored to Comcast's system and requirements that they would not function within another cable operator's system." Final ID at 12. Additionally (as discussed below), the Commission concludes that Rovi has shown that Comcast induced the infringement of the '263 and '413 patents as to the X1 STBs, and the analogous finding of the Final ID as to the



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### C. Whether Rovi Established that the X1 STBs Infringe the '263 and '413 Patents

#### 1. The Applicable Law

##### a. Infringement

##### i. Direct Infringement

35 U.S.C. 271(a) defines direct infringement and declares, “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.” The complainant in a section 337 investigation bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Certain Flooring Prods.*, Inv. No. 337-TA-443, Comm’n Notice of Final Determination of No Violation of Section 337, 2002 WL 448690, at \*59, (Mar. 22, 2002); *Enercon GmbH v. Int’l Trade Comm’n*, 151 F.3d 1376 (Fed. Cir. 1998).

##### ii. Indirect Infringement

Section 271(b) of the Patent Act also provides that “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. 271(b). “To prevail on a claim of induced infringement, in addition to inducement by the defendant, the patentee must also show that the asserted patent was directly infringed.” *Epcon Gas Sys. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033 (Fed. Cir. 2002). Furthermore, “[s]ection 271(b) covers active inducement of infringement, which typically includes acts that intentionally cause, urge, encourage, or aid another to directly infringe a patent.” *Arris Grp. v. British Telecomm.*

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Legacy STBs was not petitioned. *See* Final ID at 611. Thus, Comcast had the intent to infringe those patents with both sets of STBs. Accordingly, exhaustion applies to all STBs imported prior to the expiration of the license.

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*PLC*, 639 F.3d 1368, 1379, n.13 (Fed. Cir. 2011). The Supreme Court held that induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement. *Commil USA, LLC v. Cisco Sys, Inc.*, 135 S.Ct. 1920, 1926-27 (2015).

### 2. The Final ID

The Final ID finds direct infringement of claims 1, 2, 14, and 17 of the '263 patent and claims 1, 3, 5, 9, 10, 14, and 18 of the '413 patent. *See, e.g.*, Final ID at 399, 610-11.<sup>11</sup> The Final ID also finds that Comcast induces its customers to infringe those patents. *E.g., id.* at 610-11. The Final ID further finds that ARRIS and Technicolor do not directly or indirectly infringe those patents. *E.g., id.* at 237, 610-11.

### 3. Commission Determination and Analysis

The Commission affirms the Final ID's conclusion that Comcast's customers directly infringed the '263 and '413 patents through their use of the X1 systems in the United States. *See* Final ID at 234-38. The Final ID's unreviewed findings also conclude that Comcast induced that infringement. *See id.* at 232-34. The parties dispute whether the Final ID finds that Comcast itself directly infringed the '263 and '413 patents through Comcast's "testing and use" of the Accused Products in the United States after importation." Rovi Br. (Reply) at 12

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<sup>11</sup> The Commission agrees with the Final ID's unpetitioned finding that the parties have determined to treat claim 1 of the '263 patent as representative of the relevant claims for infringement purposes. *Id.* at 228-30, 396-400 ("Neither Rovi nor Comcast present separate, substantive argument as to whether Comcast does or does not infringe claims 2, 14, and 17 of [the '263 patent]") ("Rovi relies on the same evidence and argument presented for claim 1 of the '263 Patent to argue that claims 1, 3, 5, 9, 10, 14, and 18 [of the '413 patent] are infringed") ("Similarly, Comcast has not presented any separate, substantive non-infringement arguments for the '413 Patent."). To the extent that there are any pertinent differences between the claims, the parties, through their representations and conduct, have waived reliance on those differences.

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(citing Final ID at 211-32); Resps. Br. (Reply) at 33-34, n.12. To the extent that the Final ID so finds direct infringement by Comcast, we take no position on the issue, which, because of Comcast's inducement of its customers' direct infringement, is unnecessary for our findings of violation of section 337.<sup>12</sup> The Commission finds no section 337 violation by ARRIS or Technicolor because Rovi failed to demonstrate direct or indirect infringement by ARRIS and Technicolor.

Claim 1 of the '263 patent, which is representative of the relevant claims, recites (with Rovi's annotations):

[1pre] 1. A system for selecting television programs over a remote access link comprising an Internet communications path for recording, comprising:

[1a] a local interactive television program guide equipment on which a local interactive television program guide is implemented, wherein the local interactive television program guide equipment includes user television equipment located within a user's home and the local interactive television program guide generates a display of one or more program listings for display on a display device at the user's home; and

[1b] a remote program guide access device located outside of the user's home on which a remote access interactive television program guide is implemented, wherein the remote program guide access device is a mobile device, and wherein the remote access interactive television program guide:

[1c] generates a display of a plurality of program listings for display on the remote program guide access device, wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device;

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<sup>12</sup> Were the Commission to have found direct infringement by Comcast, the parties dispute whether section 337 can redress that infringement absent a showing of indirect infringement, in view of their differing interpretations of *Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Comm'n Op. (Dec. 21, 2011) and the subsequent Federal Circuit decision in *Suprema* concerning section 337's scope. However, this dispute is moot under the current findings.

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[1d] receives a selection of a program listing of the plurality of program listings in the display, wherein the selection identifies a television program corresponding to the selected program listing for recording by the local interactive television program guide; and

[1e] transmits a communication identifying the television program corresponding to the selected program listing from the remote access interactive television program guide to the local interactive television program guide over the Internet communications path;

[1f] wherein the local interactive television program guide receives the communication and records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment.

JX-0002 ('263 patent) at 28:27-63 (emphasis added).

The Commission affirms the Final ID's conclusion that the X1 systems meet all of the limitations of the asserted claims of the '263 and '413 patents. *See* Final ID at 211-30, 396-399. The unreviewed portion of the Final ID additionally finds as follows. Comcast also instructs, directs, or advises its customers on how to carry out direct infringement of the asserted claims of the '263 and '413 patents with the X1 STBs. *See* [

], such as CX-1886 (Xfinity TV Remote for Google Play Store) and CX-1887 (Xfinity TV Remote for Apple App Store)); Hrg. Tr. at 259-62 (Dr. Shamos, testifying on CX-1697 (Xfinity DVR Cloud Video), which instructs its customers on how to use the Xfinity DVR on the cloud using Comcast Xfinity Apps in a manner that Dr. Shamos has opined infringes the asserted claims). [

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*See* Hrg. Tr. at 903 (Dr. Wigdor); JX-0090C (Brown Dep. Tr.) at 65-68, 76-78, 80-82; JX-

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0105C (McCann Dep. Tr.) at 121-23; Hrg. Tr. at 251 (Dr. Shamos, describing how favorite channels, recently viewed programs, recently recorded programs, and parental control information can all be used to display television program listing on a mobile device based on user profile information). Furthermore, CX-1696 (The X1 Platform Video), CX-0456 (X1 Entertainment Operating System Brochure), CX-1886 (Xfinity TV Remote for Google Play), CX-1887 (Screenshots - Xfinity TV Remote), CX-1890 (Set Up Recording Webpg), and CX-1894 (Xfinity TV Remote App website), all show that Comcast instructs its customers to view the remote interactive television program guide on the user's smartphone by using the Xfinity X1 App. CX-0002C (Shamos WS) at Q/A 179. Also by using this app, customers can view a remote interactive television program guide or get "recommendations just for [the specific user]." CX-1696 (The X1 Platform Video). Once the customer has decided which programs to record, the app then communicates with the customer's DVR over the Internet and instructs the DVR to record the selected programming and displays the programs selected for recording on the remote guide generated for display to the customer. *Id.* CX-1886 (Xfinity TV Remote for Google Play) shows that the Android version of the Xfinity TV Remote App had "1,000,000 to 5,000,000" installs as of October 2016. Comcast also provides instructions to its customers on using cloud-based videos and DVR. CX-1692 (How to Get Started with Cloud-Based DVR); CX-0002C (Shamos WS) at Q/A 37, 178-79.

Comcast's customers use the Xfinity Apps in the way that Comcast promotes them, and thus directly infringe the asserted claims of the '263 and '413 patents. Hrg. Tr. (Nush) at 731 [

]. For example, Mr. Peter Nush testified at the hearing on the number of remote recording requests that occurred using the

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Xfinity Apps in the United States (including the TV App and Remote TV App). Hrg. Tr. (Nush) at 732-34. [

]. Hrg. Tr. (Nush)

at 732. For example, CX-1515C (Comcast Remote Client Application Usage Data) at 4, shows [

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As to Comcast's inducement of its customers' infringement, the Commission observes that the unreviewed portion of the Final ID finds as follows. Comcast had actual knowledge of the '263 and '413 patents at least since 2014, when Comcast and Rovi held license-renewal discussions. *See, e.g.*, CX-1725C (Comcast Interrog. Resp.) at 11-13; *see also* CDX-0303C (citing CX-0292C, CX-0272C, CX-1450C); RX-0860C. Furthermore, Comcast knew or was willfully blind to the high probability that its actions would cause its customers to infringe the '263 and '413 patents. Comcast previously licensed the '263 and '413 patents (in other words, it paid for the right to practice the patents), it received claim charts articulating Rovi's infringement allegations and did not respond to them, [

]. *See, e.g.*, CX-0001C (Armaly WS) at Q/A

114 (discussing the licensed patents and the license, JX-0051C), Q/A 120-24, 129-30 (discussing claim charts); [

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Respondents argue that their inducing conduct is not actionable under section 337 because “Comcast’s inducing conduct took place entirely domestically, after importation.” Resps. Br. at 18. Respondents miss the point. Section 337, as applied to Comcast’s relevant conduct here, requires importation of articles, proof of direct infringement, and proof of inducement, all of which have been established by the record. It is no defense to the violation of a trade statute that Comcast, from the United States, actively induces the infringement by its users as to the imported X1 STBs.<sup>13</sup> Respondents also argue that it “would be a vast and unjustified extension of the Commission’s authority and the rationale of *Suprema* to uphold the [Final] ID’s apparent conclusion that Section 337 reaches the importation of X1 STBs used domestically by Comcast’s subscribers in an X1 ‘ecosystem’ found to have substantial non-infringing uses.” Resps. Br. at 15. Respondents’ argument is flawed. The present investigation involves Comcast’s active inducement of its customers’ infringement, not contributory infringement. Because the 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. *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1364

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<sup>13</sup> Moreover, even if the location of Comcast’s inducing conduct were legally relevant, and it is not, [

]. Final ID at 9-12, 232, 234; *Wing Shing Pdts. (BVI), Ltd. 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 Apparatewerke*, 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). [

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(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).<sup>14</sup>

Rovi did not allege direct infringement by ARRIS and Technicolor. *See, e.g.*, Final ID at 211, 396-97. Also, the Final ID finds that Rovi failed to demonstrate indirect infringement by ARRIS and Technicolor. *See, e.g.*, Final ID at 611. The Commission affirms these findings.

### **D. Whether Rovi Established that Comcast’s Two Alternative Designs Infringe the ’263 and ’413 Patents<sup>15</sup>**

The Final ID concludes that Comcast’s proposed alternative designs infringe the ’263 and ’413 patents. The Commission has determined to vacate that conclusion and instead concludes that the evidence of record shows that those designs are too hypothetical to adjudicate at this time.

The Commission declines to adjudicate new products when their design is not yet final. *See Certain GPS Chips*, Inv. No. 337-TA-596, ID (unreviewed), USITC Pub. No. 4133, 2010 WL 1502175 at \*34-35 (Mar. 1, 2010) (refusing jurisdiction over new product that was still in development because the design was not final)); *cf. Certain Elec. Digital Media Devices & Components Thereof*, 337-TA-796, Comm’n Op. (Pub. Version), at 103-05 (Sept. 6, 2013)

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<sup>14</sup> The Commission has previously found a violation of section 337 where a respondent induced customers in the United States to directly infringe a U.S. method patent. *See, e.g., Certain Network Devices, Related Software & Components Thereof (II)*, Inv. No. 337-TA-945, Final ID at 107-08 (Dec. 9, 2016), reviewed on other grounds, (“Arista’s customers directly infringe the ’577 patent.”).

<sup>15</sup> The Final ID has a Conclusion of Law that the alternative designs violate the ’263 and ’413 patents. Final ID at 612. The underlying analysis in the Final ID addresses a different issue raised by Comcast—whether the existence of non-infringing uses for the Legacy and X1 products negates infringement. *Id.* at 230-31. Our analysis addresses the issue based on Comcast’s testimony and arguments regarding an alternative design made before the ALJ.



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(affirming Final ID's adjudication of design around products where the design of those products was fixed).

Respondents' argument to the ALJ shows that the design of the alternative products is

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[

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As shown above, the evidence of record demonstrates that Comcast's alternative designs are not yet final. Accordingly, the Commission has determined to vacate the Final ID's finding of infringement as to those products, and instead concludes that the alternative designs are too speculative to adjudicate at this time.

**E. Construction of "Cancel a Function of the Second Tuner to Permit the Second Tuner to Perform the Requested Tuning Operation" in the '512 Patent, and the Final ID's Infringement Determinations as to that Patent**

**1. The Applicable Law**

**a. Claim Construction**

Only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n*, 366 F.3d 1311, 1323 (Fed. Cir. 2004). When claim terms are construed, construction begins with the plain language of the claim. Claims are given their ordinary meaning as understood by a person of ordinary skill in the art ("POSITA") who views 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). When the meaning of a claim term is uncertain, the specification usually is the

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best guide. *Phillips*, 415 F.3d at 1315. “[T]he specification ‘is always highly relevant and is usually dispositive.’” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

### b. Infringement

The applicable law on infringement can be found above in section II.C.1.

### 2. The Final ID

Respondents’ petition challenged the Final ID’s claim construction of the “cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation” limitation in the asserted claims of the ’512 patent. Claim 1 is reproduced below (with Rovi’s annotations) as representative of the claims of the ’512 patent.

[la] 1. A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising:

[1b] receiving a request to perform a tuning operation;

[1c] determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and

[ld]in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to *cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.*

JX-0006 (’512 patent) at 18:35-47 (emphasis added).

Before the ALJ, the parties disputed the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation.” *See* Final ID at 421-29. The Final ID describes the parties’ proposed constructions as follows.

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Rovi's Proposed Construction	Comcast's Proposed Construction
Stop a function utilizing a signal tuned to by the second tuner in order to permit the requested function utilizing a signal tuned to by the second tuner to be performed.	Comcast does not clearly present a construction in its post-hearing brief.

*Id.* at 421.<sup>16</sup> The Final ID adopts Rovi's construction. *Id.* at 427. The Final ID cites figures 4(b) and (c), which are reproduced below.

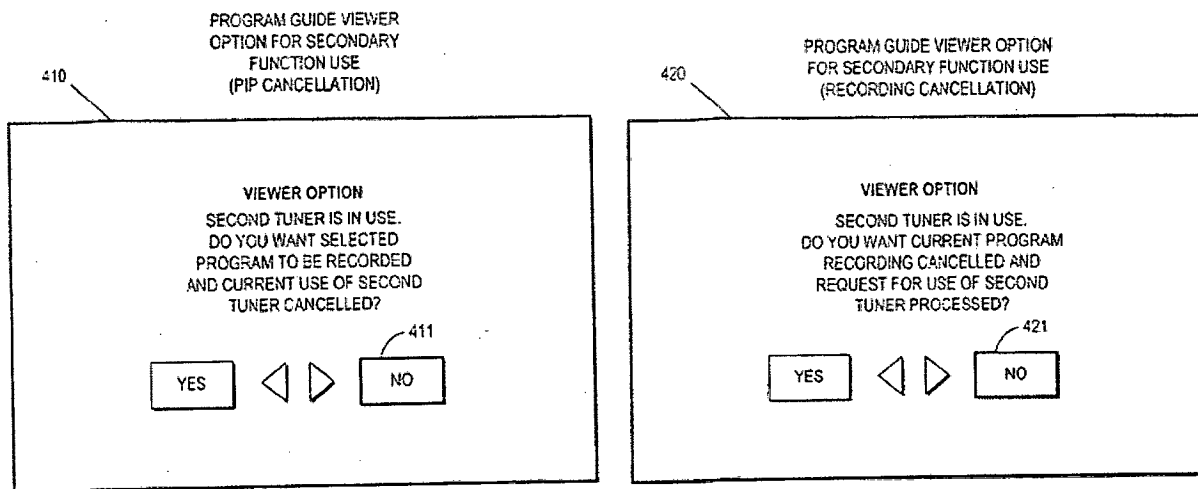


FIG. 4(b)

FIG. 4(c)

Related to the above figures, the Final ID recognizes that the specification recites,

FIG. 4(b) is an illustrative interactive television program guide viewer option selection screen for use in canceling a picture-in-picture function or other secondary user functions in accordance with the present invention.

FIG. 4(c) is an illustrative interactive television program guide viewer option selection screen for use in the cancellation of a scheduled recording in accordance with the present invention.

<sup>16</sup> Respondents' petition declares that it proposed that this phrase be construed as "terminate a function being performed by the last allocated tuner so it can perform the requested tuning operation." Resps. Pet. at 93.

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JX-0006 ('512 patent) at 2:60-67; Final ID at 428. The Final ID further quotes the Summary of the Invention, which recites,

If the [STB] is equipped with multiple tuners, the interactive television program guide will allocate one of the tuners for recording[ ] the program when it is time for the program to start. However, if all of the tuners are in use, which may be the case if the viewer is watching one program and using a picture-in-picture ("PIP") feature to view another program or to display additional text or graphics by using some other secondary tuner function feature that requires a tuner to operate, *the interactive television program guide may allocate a tuner for the recording function if the user indicates that he is no longer interested in using the PIP or another secondary tuner function or if the tuner allocation scheme dictates it do so*. Alternatively, if the [STB] is equipped with two tuners, one may be dedicated for television viewing and interactive television program guide user features, while the other tuner may be dedicated for recording use only.

Final ID at 428 (quoting JX-0006 ('512 patent) at 1:65-2:13 (emphasis provided by the Final ID)). The Final ID then concludes, "Rovi's construction is consistent with the claim language, and is supported by the specification and figures, because it ties the action (cancelling the function) to the second tuner." *Id.* at 429. The Final ID then determines that the accused Legacy STBs infringe, but the accused X1 STBs do not infringe. *Id.* at 479-81; *see also id.* at 610-11 (COFL 12, 19).

### 3. Commission Determination and Analysis

The Commission affirms and adopts the Final ID's construction and hereby supplements the findings and reasoning of the Final ID. Respondents suggest that the Final ID's construction of the disputed claim term is inconsistent with the specification. *See* Resps. Pet. at 93-94. We disagree. In the example cited in the Final ID, the "first tuner" is the tuner that is tuned to a program that is being viewed and the "second tuner" is the tuner that is tuned to a picture-in-picture program or is performing another secondary tuner function. *See* JX-0006 ('512 patent) at 2:1-10, 2:60-67, Figs. 4(b)-(c). There is nothing improper or inconsistent with the Final ID's

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reliance on this example to support its construction for the phrase “cancel a function of the second tuner to perform the requested tuning operation.” If anything, this example contradicts Comcast’s proposed construction, which the Final ID correctly rejected and which requires cancellation of the “last allocated” tuner. In the example, there is no disclosure of which of the two tuners was allocated first and which of the two the tuners was allocated second (or last).

*Id.*; see also CX-0003C (Balakrishnan WS) at Q/A 228-30. In other words, the “second tuner,” whose function of picture-in-picture or text or graphics was cancelled, could have been the first allocated tuner and the “first tuner” (whose function of viewing a program was not cancelled) or could have been the second (or last) allocated tuner. Thus, the order in which a tuner was allocated is not relevant to the issue of which tuner is cancelled; the example does not show cancelling a “last allocated tuner”; and Comcast’s proposed construction is inconsistent with the specification. Having affirmed the Final ID’s claim construction, the Commission additionally affirms the Final ID’s infringement conclusions.

### **F. Whether Respondents Established that the Asserted Claims of the ’512 Patent Are Invalid as Obvious**

#### **1. The Applicable Law**

One cannot be held liable for practicing an invalid patent claim. See *Pandrol USA, LP v. AirBoss Ry. Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). Nevertheless, each claim of a patent is presumed to be valid, even if it depends from a claim found to be invalid. 35 U.S.C. 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption of validity by “clear and convincing” evidence of invalidity. *Checkpoint Sys., Inc. v. U.S. Int’l Trade Comm’n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

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Under section 103 of the Patent Act, a patent claim is invalid “if 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 [POSITA] to which said subject matter pertains.” 35 U.S.C. 103. While the ultimate determination of whether an invention would have been obvious is a legal conclusion, it is 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) objective evidence of nonobviousness.” *Eli Lilly & Co. v. Teva Pharm. USA, Inc.*, 619 F.3d 1329 (Fed. Cir. 2010).

### 2. The Final ID

The Final ID finds claims 1, 10, 13, and 22 obvious over the combination of Nagano<sup>17</sup> and Sano.<sup>18</sup> See Final ID 530-39. Annotated claim 13 is reproduced below as representative of the asserted claims of the ‘512 patent.

[13a] 13. A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising:

[13b] a first tuner;

[13c] a second tuner; and

[13d] an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to:

[13e] receive a request to perform a tuning operation;

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<sup>17</sup> U.S. Patent No. 6,240,240 (May 29, 2001) (RX-0153).

<sup>18</sup> U.S. Patent No. 6,445,872 (Sept. 3, 2002) (RX-0152).

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[13f] determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and

[13g] in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

JX-0006 ('512 patent) at 19:41-59 (emphasis added).

In reaching its conclusion as to element 13f, the Final ID finds that a POSITA “would have been able to modify Nagano for a two-tuner [STB], such that Nagano and Sano teach and satisfy this limitation.” *Id.* at 537. The Final ID reasons,

Dr. Bederson testified that Nagano (and the Prevue Guide) recognized tuner conflicts, and that a [POSITA] knew of multiple tuners, would have been able to modify Nagano (and Prevue) to accommodate multiple tuners, and that the modification would not have been complicated. *See* RX-0004C (Bederson WS) at Q/A 107, 82-86, 302, 307, and 309. Indeed, [a POSITA] would have needed to modify Nagano when porting it on [an STB] with multiple tuners.

*Id.* at 537-38. As to element 13g, the Final ID declares that

the evidence shows that a [POSITA] would have been able to modify Nagano for a two-tuner [STB], such that Nagano and Sano teach and satisfy this limitation. *See* RX-0004C (Bederson WS) at Q/A 107, 110-11, 82-86, 135, 74-75, 302, 307, and 309. [In] particular, . . . it would have taken only ordinary skill to modify Nagano’s alert to cancel a function of the second tuner. *Id.* The combination would not eliminate Nagano’s solution to managing limited tuner resources, as the combination would still have a finite number of tuners. Accordingly, . . . the combination would not eliminate “the very problem that Nagano sought to solve” and the combination of Nagano and [Sano] teaches limitation 13g.

*Id.* at 538 (quoting Rovi Post-Hrg. Br. at 192).

### 3. Commission Determination and Analysis

The Commission has determined to affirm and adopt the Final ID as to this issue and hereby supplements the findings and reasoning of the Final ID.



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### a. “Tuner Conflicts” and “Timer Conflicts”

Underlying Rovi’s arguments is its positions that the prior art makes a distinction between “tuner conflicts” and “timer conflicts”; that neither Nagano nor Sano recite tuner conflicts; and that modifying a reference from a timer conflict to a tuner conflict is an obstacle supporting the nonobviousness of the asserted claims over the combination of Nagano and Sano. Rovi Pet. at 49-61. To the extent the Final ID does not explicitly do so, the Commission hereby rejects each of those positions.

First, the prior art does not include a distinction between tuner and timer conflicts. For example, during prosecution of the application resulting in the ’512 patent, the Examiner rejected this purported distinction. While the applicant attempted to draw this distinction while arguing past a reference during prosecution (and as acknowledged by Respondents’ expert), the examiner did not accept it as a basis to distinguish the ’512 patent over the prior art. *See* RDX-710, -711 (excerpts from the prosecution history of the ’512 patent); *see also* RX-0004C (Bederson WS) at Q/A 32-37 (Q. 33 “Did the examiner accept [the timer vs. tuner] argument? A. 33 No. The examiner issued an additional rejection once again based on the LaJoie reference . . .”). The applicant had to rely on amendments and arguments requiring the use of two tuners to distinguish over the prior art. *See* RDX-713, -714 (excerpts from the prosecution history of the ’512 patent); *see also* RX-0004C (Bederson WS) at Q/A 34-35. Additionally, while Rovi argues that Dr. Balakrishnan testified that a timer conflict “involves the setting of a timer to view or record a television program at a future time,” Dr. Balakrishnan testified that any future event, regardless of how soon in the future would be a “timer” event:

Q. So, in your opinion, it doesn’t matter how soon in the future the recording is being set, correct?

A. If you are setting the recording it is different than tuning it now.

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RX-0004C (Bederson WS) at Q/A 40 (citing Balakrishnan 10/29/2016 Dep. Tr. at 248:19-249:17 (stating that an event less than one second in the future would be a timer event)); *see also id.* at Q/A 38-39; Hrg. Tr. at 1201:12-1202:8. Dr. Bederson then explained that Dr. Balakrishnan's timer versus tuner distinction has no logical boundaries. RX-0004C (Bederson WS) at Q/A 40 ("A one second delay is nominal, and could be indistinguishable from a tuning operation such as a channel change. Dr. Balakrishnan's distinction between 'scheduling events' and 'tuning operations' does not appear to have logical boundaries.").

Second, both Nagano and Sano describe what Rovi alleges to be tuner conflicts, thus rendering any timer-tuner modification unnecessary. Dr. Bederson testified that Nagano taught tuner conflicts: "Nagano provides an alert . . . in the case of overlapping recordings. Contrary to Rovi's contention, *Nagano does not place any limitation on when the timer is set*, and it could be set to record at the present time." *Id.* at Q/A 110 (emphasis added). And, Sano recognizes the problem of running out of tuner resources and does not place any temporal limitation on when the conflict occurs. Rather, Sano says if more than three channels are set to record at one time (whatever time that might be), this will cause a conflict. RX-0004C (Bederson WS) at Q/A 76. Specifically:

In the case of the digital broadcast recording and reproducing apparatus of FIG. 5, the number of channels that can be arbitrarily selected and simultaneously recorded is three. *Therefore, if the number of channels more than three is set in the same time period in the timer recording setting, it is impossible to record all the set channels.*

RX-0152 (Sano) at 12:53-65 (emphasis added).

Third, even if there was a distinction between timer and tuner conflicts, the modification of one to the other could be accomplished through the application of well-known engineering techniques to yield predictable results. Dr. Bederson testified that, regardless of whether a reference teaches a timer conflict (*i.e.*, a scheduling conflict) or a tuner conflict (which Dr.

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Balakrishnan states must occur immediately, and cannot be at any point, no matter how soon, in the future), there is still a conflict between two requests for a single physical tuner. RX-0004C (Bederson WS) at Q/A 39. As Dr. Bederson testified, a POSITA would have understood that “any request for resources in the future can be adapted to present conflicts through the application of well-known engineering techniques to yield predictable results” and would be nothing more than “a simple substitution, or reuse, of the same conflict detection techniques used for future scheduled recordings” to a present conflict. *Id.* at Q/A 39, 305. Instead of looking at conflicts only for future recordings, “the [IPG] could look for a conflict upon any function (*e.g.*, channel change, etc.) that involves the tuner.” *Id.* at Q/A 305. A POSITA would be motivated to make such a change because the modification furthers the same “goal of providing an improved user experience, and allowing uninterrupted viewing of television programming.” *Id.* at Q/A 39.

### **b. Reason to Combine**

Rovi argues that the Final ID fails to make the required finding that a POSITA would have had a reason to combine Nagano and Sano to arrive at the claimed invention. To the extent the Final ID does not explicitly make such a finding, the Commission does so now.

Respondents’ expert, Dr. Bederson, provided persuasive testimony regarding the reasons to combine the Nagano and Sano references. One such reason is to obtain the predictable result obtained from the application of a standard engineering technique. *See* RX-0004C (Bederson WS) at Q/A 302 (“Combining [IPGs] with [STBs], containing one or more tuners, was a well-known technique that would be performed using known methods, to yield predictable results. And, applying [IPGs] that determine conflicts, and alert the user to the conflict, to a program guide managing one or more tuners would similarly provide predictable results, because determining a conflict is a non-complex problem that effectively consists of an ‘if then’

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statement, regardless of whether one, two, or one hundred tuners are in use.”). Another such reason is the simple substitution of one known element for another to obtain predictable results. *Id.* at Q/A 307 (“The resolution of the tuner conflict with respect to the ‘second tuner’ (e.g., claims 1 and 13), is a simple substitution of one known element for another to obtain predictable results. The prior art clearly teaches resolution of a conflict with respect to a first tuner, as I have previously testified in response to QUESTIONS 36-44, and as is demonstrated in (RX-0063 (LaJoie) at Fig. 12 (annotated). Substituting a second tuner for the first tuner, and using the same techniques to resolve the conflict, is a simple substitution of one known element (second tuner) for another (first tuner) to obtain predictable results. In either case, you free a tuner to make it available to handle a new request.”)); *see also* RX-0004C (Bederson WS) at Q/A 298-309. Additionally, the Final ID properly relies on Dr. Bederson’s testimony regarding why it would be obvious to add conflict resolution to an STB with multiple tuners. Namely, STBs with additional services (e.g., record additional channels, provide picture-in-picture) have the same potential for conflict (i.e., exhausting the available tuners) as STBs with only one tuner. *See* Final ID at 536 (citing RX-0004C (Bederson WS) at Q/A 309 (“Q309. Why would it be obvious to combine the concepts of an [IPG] intended for a single tuner to a [STB] with multiple tuners? A309. . . . It would be equally obvious to try [IPGs] on [STBs] with multiple tuners. Especially since the multiple tuners were intended to provide additional functionality (e.g. watch and record, or picture-in-picture which provides two pictures), the likelihood of conflict still exists. It would therefore be obvious to try . . . the conflict resolution techniques taught in the prior art (e.g., . . . Sano. . . .”). Rovi and its expert, Dr. Balakrishnan, never address this basic point. A conflict will arise whenever the number of requests exceeds the number of tuners, no matter how many. RX-0004C (Bederson WS) at QA 303. This basic

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concept would naturally lead a POSITA to combine Sano with Nagano, a conflict-detection reference. *Id.* Even assuming *arguendo* that adding a second tuner “may not have been desirable for economic and other reasons at the time of the invention,” CX-1902C (Balakrishnan RWS) at Q/A 177, this would not negate a finding of a reason to combine. The possible economic undesirability of a combination would not “discourage one of ordinary skill in the art from seeking the convenience expected therefrom.” *In re Farrenkopf*, 713 F.2d 714, 718 (Fed. Cir. 1983).

Rovi argues that the Final ID erroneously finds that a POSITA would have known “to modify Nagano . . . to accommodate multiple tuners, and that the modification would not have been complicated” and that “Dr. Bederson provided no such testimony.” We disagree with Rovi. Dr. Bederson testified as to this exact issue. *See* Final ID at 536 (citing RX-0004C (Bederson WS) at Q/A 85); *see also* RX-0004C (Bederson WS) at Q/A 107, 263-64, 286-87. Rovi similarly is incorrect in stating that Dr. Bederson’s testimony “does not address whether Nagano recognized or otherwise taught tuner conflicts.” Dr. Bederson also addressed this issue directly. RX-0004C (Bederson WS) at Q/A 39, 110, 309.

### **G. Whether the ARRIS-Rovi Agreement Provides a Defense to the Allegations against the ARRIS Respondents**

The Commission takes no position on this issue. The Commission has previously determined that there is no violation of section 337 as to ARRIS. *See supra* section III.C; *see also Beloit*, 742 F.2d at 1423.

### **H. Whether Rovi Established the Economic Prong of the Domestic Industry Requirement Based on Patent Licensing**

The Commission takes no position on this issue. The Commission had determined not to review the Final ID’s conclusion that Rovi established the economic prong of the domestic industry requirement (through subsections (A), (B), and (C) (research and development)). Rovi

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has otherwise established the economic prong of the domestic industry requirement, and thus, the Commission need not take a position as to whether Rovi established the economic prong of the domestic industry requirement based on patent licensing. *See Beloit*, 742 F.2d at 1423.

### **III. REMEDY**

#### **A. Limited Exclusion Order**

##### **1. The Applicable Law**

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, 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.” 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. U.S. Int’l Trade Comm’n*, 787 F.2d 544, 548 (Fed. Cir. 1986). The Commission may issue an LEO excluding the goods of the person(s) found in violation, or, if certain criteria are met, a general exclusion order against all infringing goods regardless of the source.

##### **2. Commission Determination and Analysis**

The Commission has determined to issue an LEO as to Comcast’s infringing digital video receivers and hardware and software components thereof. The order prohibits the entry of these products that “are 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.” In other words, infringing STBs imported by or on behalf of Comcast, but manufactured by other parties, such as ARRIS and Technicolor, are prohibited from entry. Persons seeking to import infringing digital video receivers and

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hardware and software components thereof that are potentially subject to exclusion may certify that, to the best of their knowledge and belief, the products being imported are not subject to exclusion. The Commission is including the following language to address specific issues related to its Order:

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 capable of being used after importation in a manner which infringes the claims of the patents that are the subject of this Order because one or more elements (such as software elements) of the internet communications path described by the claims of the patents in paragraph 1 of this Order are omitted from the internet communications path that the imported products will use after importation. 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.

The above language permits CBP to allow a party to certify that imported products are not capable of infringing the claims at issue as adjudicated herein. However, to be clear, the Commission has not adjudicated any alternative designs presented by Comcast and the language of the patent claims are controlling as to the scope of the remedial orders.

Respondents’ proposed LEO includes a request for an exception for the import of replacement STBs. However, Respondents’ briefing does not provide a justification for that broad exception, and, as discussed below, Respondents argue that it would be easy to produce non-infringing versions of the accused STBs. Accordingly, the Commission has determined to not include this exception. *See Certain Automated Teller Machines, ATM Modules, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-972, Comm’n Op. (Pub. Version), at 25 (June 12, 2017). However, the Commission has determined to include an exception to the remedial order for replacement parts used to repair previously-imported STBs,

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as discussed below. *See Certain Sleep-Disordered Breathing Treatment Sys. & Components Thereof*, Inv. No. 337-TA-890, Comm'n. Op. at 47 (Jan. 16, 2015).

### B. Cease and Desist Orders

#### 1. The Applicable Law

The Commission also has authority to issue CDOs in addition to or in lieu of exclusion orders. *See* 19 U.S.C. 1337(f). The Commission generally issues CDOs to respondents who maintain commercially significant inventories of infringing products in the United States.<sup>19</sup> *See, Certain Automated Teller Machines, ATM Modules, Components Thereof, & Pdts. Containing Same*, Inv. No. 337-TA-989, Comm'n Op. at 24 (Aug. 3, 2017).

#### 2. The RD

As to the Comcast respondents, the RD declares,

[I]n order to supply its customers with [STBs], Comcast ships and stores millions of imported, accused [STBs] through an extensive warehousing and distribution network that reaches throughout the United States.

... [I]t would [undercut an] LEO to permit Comcast to send the adjudicated, infringing products through its warehousing and distribution network for ultimate delivery to end-users. Consequently, it is recommended, if a violation is found, ... that the Comcast respondents ... should be subject to a [CDO].

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<sup>19</sup> The Commissioners have adopted different approaches to analyzing when it is appropriate to issue CDOs. In particular, Chairman Schmidlein has explained that she does not believe a commercially significant inventory is a prerequisite for obtaining a cease and desist order. *See Certain Table Saws Incorporating Active Injury Mitigation Technology and Components Thereof*, Investigation No. 337-TA-965, Comm'n Op. at 6-7, n.2 (Pub. Vers.) (Feb. 1, 2017). Chairman Schmidlein has stated that the presence of some infringing domestic inventory, regardless of the commercial significance, provides a basis to issue a cease and desist order. *See id.* There is no disagreement in the present investigation, however, as to the appropriateness of the issuance of CDOs as to Comcast.



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Nevertheless, a [CDO] should refrain from reaching products that were not imported in violation of section 337. Specifically, . . . Rovi has argued that Comcast inventory amassed during the license period is immaterial, and that Comcast should not be able to distribute imported, infringing products after a license has expired. Yet, . . . pursuant to an express license between Rovi and Comcast, products imported before April 1, 2016 are not unlawful imports, and there has been no an unfair act that would constitute a violation of section 337. ID at 553-54. The [ALJ] has made no determination of whether a subsequent domestic activity connected to products imported before April 1, 2016 (e.g., any use or sale completed on or after April 1, 2016 of a [STB] imported before April 1, 2016) infringes the asserted patents under the Patent Act. In any event, any such activity would not constitute, or be the result of, a violation of section 337.

RD at 11-12 (footnote omitted).

### 3. Commission Determination and Analysis

The Commission finds that CDOs should issue to Comcast. Respondents argue that any CDO should contain an exception for service, maintenance, and replacement parts for customers that obtained STBs prior to the effective date of the CDO. Rovi does not object, and we agree that such an exception should be included. *See, e.g., Automated Teller Machines*, Inv. No. 337-TA-972, [CDO] at 3 (May 19, 2017). However, like with the LEO, the Commission has determined that the CDO should not include an exception for replacement STBs. *See Automated Teller Machines*, Inv. No. 337-TA-972, Comm’n Op. (Pub. Version), at 25. For the reasons noted herein and articulated in the RD, as well as of the finding of patent exhaustion (discussed above), the Commission agrees with Respondents that the CDO should not apply to activity related to STBs lawfully imported and purchased pursuant to the Rovi-Comcast license.

## IV. THE PUBLIC INTEREST

### A. The Applicable Law

Section 337 requires the Commission, upon finding a violation of section 337, to issue a remedy, “unless, after considering the effect of such exclusion upon the public health and

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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 remedial order should not be issued. *See* 19 U.S.C. 337(d)(1), (f)(1). “Public interest considerations, where they are present in section 337 investigations, are not meant to be given mere lip service.” *Certain Inclined-Field Acceleration Tubes & Components Thereof*, Inv. No. 337-TA-67, USITC Pub. No. 1119, Comm’n Op. at 21 (Dec. 1980).

### B. Commission Determination and Analysis

The Commission finds that the evidence of record does not indicate that any public interest concerns would be impacted that would require tailoring or denying the issuance of any remedial order issued here.<sup>20</sup>

#### 1. Public Health and Welfare

The products at issue—digital video receivers and hardware and software components thereof—are used primarily for entertainment purposes, and the evidence supports the conclusion that these products do not implicate any particular health or welfare need. Respondents argue that the STBs at issue are “critical components in the dissemination of public health and safety information to the more than [ ] Americans that subscribe to Comcast cable services,” and that “[a]n interruption in the supply of STBs will cause consumers

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<sup>20</sup> The Commission has considered comments on the public interest from non-parties. Comments were received from Senator Patrick Toomey (PA) and Representatives Jackie Speier (CA), Patrick Meehan (PA), Brendan Boyle (PA), and Robert Brady (PA). The Commission also received comments from the American Association of People with Disabilities and the Older Adults Technology Services. The Commission further received comments from Rick Manning of the Americans for Limited Government. The Commission additionally received comments from Cypress Semiconductor Corporation, Universal Electronics Inc., Dycom Industries, Inc., Communications Test Design, Inc., and Western Digital Corporation.

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to go without cable services, impede their access to health and safety information, and cause vulnerable consumers to be further impeded in their ability to live independently and enjoy equivalent access to cable television.” Resps. Br. at 57-58.<sup>21</sup> However, the record shows that there are numerous other sources through which the public obtains this information regarding public health and safety. These sources include, for example, mobile phones, tablets, cable TV substitutes (such as direct broadcast satellite providers), and other technological alternatives. See Rovi Br. (Reply), Appendix 1, Spulber<sup>22</sup> Submission at ¶¶ 49-67, n.41.

Respondents’ assertion that an order would deprive consumers, in particular disabled or elderly customers, of the “unique” capabilities of the X1 STBs’ voice control features is incorrect. Consumers, including the blind, disabled, and elderly, have other options for voice activation, including Amazon’s Echo and Google’s Home devices, and devices from other cable companies, cable alternatives, and TV manufacturers. See, e.g., Introducing Entertainment Capabilities in Alexa Smart Home - New Device Controls for TVs, AV Receivers, and IR Hubs, Jeff Blankenburg (July 13, 2017), <https://developer.amazon.com/blogs/alexa/post/78f44d51-5bdf-4a4c-8eaa-57d1282c8212/introducing-entertainment-capabilities-in-alexa-smart-home-new-device-controls-for-tvs-av-receivers-and-ir-hubs> (last visited Nov. 16, 2017); Voice Activated TV: The Smarter Choice, Amulet Devices, <http://www.amuletdevices.com/index.php/SEO-Articles/article-voice-activated-tv.html> (last visited Nov. 16, 2017); Sony Lets Google Home Be Your Remote Control, CNET, Andrew

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<sup>21</sup> Among the material submitted by Respondents were Public Interest and Remedy Submissions from Ronald A. Cass and Robert A. Rogowsky, Ph.D, and a paper by The Internet and Television Association, *Unleashing Connectivity and Entertainment in America*.

<sup>22</sup> Daniel F. Spulber, Ph.D., is an economics professor and a Rovi witness.

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Gebhart (Dec. 20, 2016) <https://www.cnet.com/news/sony-enables-google-home-on-its-smart-tvs-and-speakers/> (last visited Nov. 16, 2017);

<https://www.att.com/gen/pressroom?pid=23394&cdvn=news&newsarticleid=35418> (“AT&T[] U-verse® is making it easier for U-verse TV customers, including those with disabilities such as vision and hearing loss, to control their TV with the new U-verse Easy Remote App.”) (last visited Oct. 11, 2017); <https://www.dish.com/remotes/voice-remote/> (DISH’s Voice Remote allows “[s]urf the channels or search for your favorite programming all by simply speaking to the new Voice Remote”) (last visited Oct. 12, 2017).

Moreover, because Comcast repeatedly alleges that it can easily remove the infringing functionalities, the record suggests that Comcast has several avenues to determine whether it may import its purported redesign products. These avenues include requesting an advisory opinion from the Commission pursuant to 19 CFR 210.79(a), seeking an official ruling from Customs pursuant to 19 CFR part 177, or awaiting Customs action on importation as a predicate for a protest under 19 CFR 1514. *See, e.g., Ninestar Tech. Co., v. Int’l Trade Comm’n*, 667 F.3d 1373, 1384-85 (Fed. Cir. 2012) (agreeing with the Commission that one appropriate vehicle for a respondent to request a determination that a redesigned product does not infringe and, thus, does not fall within the Commission’s exclusion order is to seek an advisory opinion from the Commission). By doing so, Comcast’s customers may be able to receive non-infringing STBs with voice activation. None of the asserted patents relates to voice activation features.

## **2. Competitive Conditions in the United States Economy**

There is no evidence that the Commission’s remedial orders will harm competitive conditions in the United States economy. As noted, Comcast has averred that it could easily modify its STBs to remove infringing functionality. Moreover, the many alternatives to

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Comcast's cable TV services would not be impacted by any remedial orders. These include direct broadcast satellite providers, over-the-top television services, and other technological alternatives.<sup>23</sup> See Rovi Br. (Reply), Appendix 1, Spulber Submission at ¶¶ 77-80; *see also id.* at ¶ 79 (discussing competitive conditions in the provision of STBs and declaring that “[t]he productive capacity of these companies as described in the previous section would still be in place. Those companies would still compete to supply STBs to television services companies and to retail customers.”); *id.* at ¶ 80 (discussing competitive conditions in other industries that use television services). Dr. Spulber explains that the report relied on by Respondents’ expert is “not specific to Comcast because the data is aggregated for the 200 networks of the cable industry as a whole,” but that that report “does shed light on the CATV providers overall.” *Id.* at ¶ 77. Dr. Spulber further explains that “the report emphasizes that infrastructure investments by CATV providers have increased competition in the industry.” *Id.*

Respondents argue that the accused products

are not ordinary consumer products that are generally available for purchase. There are not a large number of firms competing in this industry and in the event of a remedial order, this number would be reduced even further. . . . [T]he requested remedy would negatively affect competitive conditions in the United States by harming a major player in the industry and thus hindering competition. The Commission should consider the harm to competitive conditions in the United States and accordingly tailor and delay any remedy by six months.

Resps. Br. at 61. However, Respondents’ argument is conclusory and lacks evidentiary support. Respondents and the non-party commenters have also not explained why a delay of six months,

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<sup>23</sup> Direct broadcast satellite (DBS) providers include DirecTV and Dish/Echostar. Over-the-top (OTT) services include Sling TV, DirecTV Now, and YouTube TV. Rovi Br. (Reply), Appendix 1, Spulber Submission at ¶¶ 63, 66.

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as opposed to any other period of time, would be appropriate. Nor have they provided a meaningful explanation of why a delay of six months is necessary.

Respondents further argue that “the proposed remedy in this Investigation will have an adverse impact on domestic employment.” Resps. Br. at 65. These assertions are likewise conclusory and not supported by convincing evidence. For example, nearly all of the statements from non-party commenters do not allocate or provide any other indication of the percentage of jobs allegedly at risk that are related solely to the infringing X1 STBs, which are in any event not produced in the United States, as opposed to any other Comcast products and services. And again, Comcast has repeatedly emphasized that modifying the software of the infringing systems to render those systems non-infringing would be easy to accomplish. Furthermore, Respondents’ assertions do not consider the effect of the delay or denial of remedial orders on Rovi employees (or employees of other companies) that would be adversely affected if the remedies did not issue or were to be delayed.

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

Respondents declare that “[t]here is no evidence of any U.S. production of like or directly competitive products that would be impacted by a remedial order in this Investigation.” Resps. Br. at 61. Thus, this factor does not support denying or restricting relief.

### **4. United States Consumers**

Any effect on United States consumers also does not warrant denying Rovi relief. In Comcast’s own words,

Ninety-nine percent of consumers can choose among three or more MVPDs [multichannel video programming distributors], and the explosive growth of an ever-expanding number of online video distributors (‘OVDs’) is giving consumers new video options (and many on a nationwide basis). Faced with fierce competition, providers are intent on giving consumers the flexibility they demand to access video

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programming on the devices of their choice, and delivering more value to customers.

Comments of Comcast Corporation and NBC Universal Media, LLC to the Federal Communications Commission (April 22, 2016), at page 3, available at <http://corporate.comcast.com/images/2016-04-22-AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf> (last visited Oct. 20, 2017).

Respondents argue that “consumers rely on Comcast . . . to provide the equipment and consumers view STBs not as purchased goods for which they are responsible to repair and replace, but as rented goods for which the provider is expected to repair or replace any defective STBs quickly.” However, the remedial orders issued along with this opinion allow the importation of component parts to repair customers’ existing STBs. Moreover, Comcast has repeatedly emphasized that modifying the software of the infringing systems to render those systems non-infringing would be easy to accomplish and Comcast may take advantage of the opportunity to obtain a ruling from either the CBP or the Commission. Accordingly, the evidence of record indicates that the public interest concerns of consumers will not be adversely impacted such that remedial orders should be denied or the effective date of the orders delayed.

## **V. BONDING**

### **A. The Applicable Law**

If the Commission enters an exclusion 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 complainant from any injury.” 19 U.S.C. 1337(j)(3); *see also* 19 CFR 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

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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 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).

### B. The RD

The RD declares,

[C]alculating a price differential between the accused products and the domestic industry products is not feasible. . . . Rovi has, however, set forth evidence and argument, based on the opinion of Dr. Putnam, that a reasonable royalty rate for the accused [STBs] would be approximately [ ] per unit.

Rovi's royalty-rate proposal is based on its expert's analysis of licenses to [STB] manufacturers other than respondents. The licenses are all portfolio licenses. Yet, Rovi has not attempted to show, much less has it demonstrated, the role the asserted patents play in the cost of the licenses, if they play any role at all. Additionally, some of the licenses cover more than simply patents.

. . . [I]t is not clear that Rovi's proposal of [ ] per unit reflects what a reasonable royalty rate would be relevant to the asserted patents. Consequently, it is recommended that no bond (*i.e.*, 0%) be required



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during any Presidential review period. *See Network Devices (I)*, Inv. No. 337-TA-944, Comm'n Op. at 57.

RD at 15-16 (certain citations omitted).

**C. Commission Determination and Analysis**

The Commission has determined not to issue a bond. 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 [ ] 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.

By Order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton'.

Lisa R. Barton  
Secretary to the Commission

Issued: December 6, 2017

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

**Inv. No. 337-TA-1001**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **COMMISSION OPINION** has been served upon the following parties as indicated on **December 6, 2017**.



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

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

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**On Behalf of Respondents Arris International plc, Arris  
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**UNITED STATES INTERNATIONAL TRADE COMMISSION**  
**Washington, D.C.**

**In the Matter of**

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

**Investigation No. 337-TA-1001**

**NOTICE OF COMMISSION DETERMINATION TO REVIEW IN PART A FINAL  
INITIAL DETERMINATION FINDING A VIOLATION OF SECTION 337; SCHEDULE  
FOR FILING WRITTEN SUBMISSIONS ON THE ISSUES UNDER REVIEW AND ON  
REMEDY, THE PUBLIC INTEREST, AND BONDING; GRANT OF JOINT  
UNOPPOSED MOTION FOR LEAVE TO AMEND THE COMPLAINT AND NOTICE  
OF INVESTIGATION TO CORRECT CORPORATE NAMES OF TWO ARRIS  
RESPONDENTS**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission (the "Commission") has determined to review in part the final initial determination ("the Final ID") issued by the presiding administrative law judge ("ALJ") on May 26, 2017, finding a violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337) ("section 337") in connection with certain asserted patents. The Commission has also determined to deny Respondents' motion requesting leave to file a reply to Rovi's response to Respondents' petition for review of the Final ID. The Commission has further determined to grant a joint unopposed motion for leave to amend the complaint and notice of investigation to correct the corporate names of certain respondents.

**FOR FURTHER INFORMATION CONTACT:** Ron Traud, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone 202-205-3427. 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 at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket ("EDIS") at <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:** The Commission instituted this investigation on May 26, 2016, based on a complaint filed on behalf of Rovi Corporation and Rovi Guides, Inc.

(collectively, "Rovi"), both of San Carlos, California. 81 FR 33547-48 (May 26, 2016). The complaint, as amended, alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, by reason of infringement of certain claims of U.S. Patent No. 8,006,263 ("the '263 patent"); U.S. Patent No. 8,578,413 ("the '413 patent"); U.S. Patent No. 8,046,801 ("the '801 patent"); U.S. Patent No. 8,621,512 ("the '512 patent"); U.S. Patent No. 8,768,147 ("the '147 patent"); U.S. Patent No. 8,566,871 ("the '871 patent"); and U.S. Patent No. 6,418,556 ("the '556 patent"). The complaint further alleges that a domestic industry exists. *Id.* at 33548.

The Commission's notice of investigation named sixteen respondents. The respondents are Comcast Corporation of Philadelphia, PA; Comcast Cable Communications, LLC of Philadelphia, PA; Comcast Cable Communications Management, LLC of Philadelphia, PA; Comcast Business Communications, LLC of Philadelphia, PA; Comcast Holdings Corporation of Philadelphia, PA; Comcast Shared Services, LLC of Chicago, IL; Technicolor SA of Issy-les-Moulineaux, France; Technicolor USA, Inc. of Indianapolis, IN; Technicolor Connected Home USA LLC of Indianapolis, IN; Pace Ltd. of Saltaire, England (now ARRIS Global Ltd.); Pace Americas, LLC of Boca Raton, FL; ARRIS International plc of Suwanee, GA; ARRIS Group Inc. of Suwanee, GA; ARRIS Technology, Inc. of Horsham, PA; ARRIS Enterprises Inc. of Suwanee, GA (now ARRIS Enterprises LLC); and ARRIS Solutions, Inc. of Suwanee, GA. 81 FR at 33548. The Office of Unfair Import Investigations is not a party to this investigation. *Id.*

Prior to the evidentiary hearing, Rovi withdrew its allegations as to certain patent claims. *See* Notice of Commission Determination Not to Review an Initial Determination Granting Complainants' Motion to Terminate Certain Asserted Patent Claims from the Investigation (Oct. 21, 2016); Notice of Commission Determination Not to Review an Initial Determination Granting Complainants' Motion to Terminate Certain Asserted Patent Claims from the Investigation (Dec. 2, 2016); Notice of Commission Determination Not to Review an Initial Determination Terminating U.S. Patent No. 8,768,147 from the Investigation (Dec. 28, 2016). Rovi proceeded at the evidentiary hearing on the following patents and claims: claims 7, 18, and 40 of the '556 patent; claims 1, 2, 14, and 17 of the '263 patent; claims 1, 5, 10, and 15 of the '801 patent; claims 12, 17, and 18 of the '871 patent; claims 1, 3, 5, 9, 10, 14, and 18 of the '413 patent; and claims 1, 10, 13, and 22 of the '512 patent.

On May 26, 2017, the ALJ issued the Final ID, which finds a violation of section 337 by the respondents in connection with the asserted claims of the '263 and '413 patents. The Final ID finds no violation of section 337 in connection with the asserted claims of the '556, '801, '871, and '512 patents. The ALJ recommended that, subject to any public interest determinations of the Commission, the Commission should issue a limited exclusion order directed to the accused products, that cease and desist orders issue to the respondents, and that the Commission should not require any bond during the Presidential review period.

On June 12, 2017, Rovi and the respondents filed petitions for review of the Final ID. The respondents petitioned thirty-two of the Final ID's conclusions, and Rovi petitioned seven of the Final ID's conclusions. On June 20, 2017, the parties filed responses to the petitions for review. On July 11, 2017, Rovi and the respondents filed statements on the public interest. The Commission also received numerous comments on the public interest from the public.

On June 26, 2017, Respondents filed a motion requesting leave to file a reply to Rovi's response to Respondents' petition for review, and on June 29, 2017, Rovi filed a response in opposition to that motion. That motion is denied.

On July 5, 2017, Rovi and the ARRIS respondents filed a Joint Unopposed Motion for, and Memorandum in Support of, Leave to Amend the Complaint and Notice of Investigation to Correct Corporate Names of Two ARRIS Respondents. The motion indicates that ARRIS Enterprises, Inc. has changed its name to ARRIS Enterprises LLC and that Pace Ltd. has changed its name to ARRIS Global Ltd. That motion is granted.

On July 25, 2017, Comcast submitted with the Office of the Secretary a letter including supplemental disclosure and representations. On July 31, 2017, Rovi submitted with the Office of the Secretary a response thereto, which asserted that "this new evidence confirms that there is no reason for the Commission to review" certain of the Final ID's conclusions. On August 9, 2017, Comcast filed a response to Rovi's submission. The Commission has determined to reopen the evidentiary record and accept the supplemental disclosure, response thereto, and reply to the response.

Having examined the record in this investigation, including the Final ID, the petitions for review, and the responses thereto, the Commission has determined to review the Final ID in part. In particular, the Commission has determined to review the following:

- (1) The Final ID's determination that Comcast is an importer of the accused products (Issue 1 in Respondents' Petition for Review).
- (2) The Final ID's determination that Comcast has not sold accused products in the United States after the importation of those products into the United States (the issue discussed in section III of Rovi's Petition for Review).
- (3) The Final ID's determination that the accused Legacy products are "articles that infringe" (Issue 2 in Respondents' Petition for Review).
- (4) The issue of whether the X1 products are "articles that infringe" (Issue 3 in Respondents' Petition for Review), the issue of direct infringement of the '263 and '413 patents by the X1 accused products (Issue 5 in Respondents' Petition for Review), and the issue of "the nature and scope of the violation found" (the issue discussed in section X of Respondents' Petition for Review).
- (5) The issue of whether Comcast's two alternative designs infringe the '263 and '413 patents (Issue 4 in Respondents' Petition for Review).
- (6) The Final ID's claim construction of "cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation" in the '512 patent, and the Final ID's infringement determinations as to that patent (Issue 26 in Respondents' Petition for Review).

(7) The Final ID's conclusion that the asserted claims of the '512 patent are invalid as obvious (the issue discussed in section VI.B.4 of Rovi's Petition for Review).

(8) The issue of whether the ARRIS-Rovi Agreement provides a defense to the allegations against the ARRIS respondents (the issue discussed in section XI of Respondents' Petition for Review).

(9) The Final ID's conclusion that Rovi did not establish the economic prong of the domestic industry requirement based on patent licensing (the issue discussed in section IV of Rovi's Petition for Review).

The Commission has determined to not review the remainder of the Final ID. The Commission has further determined that Respondents' petition of the Final ID's determinations is improper as to the following issues: (1) the representative accused X1 products for the '263, '413, and '801 patents; (2) the induced infringement of the '263 and '413 patents; and (3) the eligibility under 35 U.S.C. 101 of the '512 patent. *See* 19 CFR 210.43(b)(2) ("Petitions for review may not incorporate statements, issues, or arguments by reference."). Those assignments of error are therefore waived.

The parties are requested to brief their positions with reference to the applicable law and the evidentiary record regarding the questions provided below:

(1) As to whether the Legacy accused products are "articles that infringe" (Issue 2 in Respondents' Petition for Review):

Has Rovi shown (or has Comcast conceded) that a Legacy accused product that infringes the asserted patents (and if so, which patents) has been imported or re-imported by any respondent or that respondent's agent(s)?

(2) As to whether the X1 products are "articles that infringe" (Issue 3 in Respondents' Petition for Review), the issue of direct infringement of the '263 and '413 patents by the X1 accused products (Issue 5 in Respondents' Petition for Review), and the issue of "the nature and scope of the violation found" (the issue discussed in section X of Respondents' Petition for Review):

a. For purposes of giving rise to a section 337 violation and whether the X1 STBs are "articles that infringe," is the importation of and infringement through the use of the X1 STBs distinguishable from the importation of and infringement through the use of the scanners in *Suprema v. Int'l Trade Comm'n*, 796 F.3d 1338 (Fed. Cir. 2015)? For example, is *Suprema* distinguishable because the imported X1 STBs require cooperation with hardware (a mobile device and Comcast's servers) that is not imported by the respondents for an act of infringement to occur? Note that, in *Suprema*, the imported scanners were "not standalone products," but rather, to function, the scanners had to "be connected to a computer, and that computer must have

custom-developed software installed and running.” 796 F.3d at 1341-42.

b. Please discuss any relevant statutory language, legislative history, case law, and Commission precedent that does or does not support interpreting the language of section 337 such that the X1 STBs are “articles that infringe” and that a violation arises from the importation or sale in the United States after importation of the X1 STBs.

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 one or more cease and desist orders 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 Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843 (December 1994) (Commission Opinion).

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 orders 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.

The parties and the public are requested to brief their positions regarding the public interest. The Commission is particularly interested in responses to the following:

Should the Commission tailor any remedy to mitigate any harm considered by the public interest factors? Please provide any support, factual or otherwise, and relate that support to specific public interest factors.

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 on the issues identified in this notice. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions

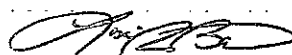
on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding. Complainants are requested to submit proposed remedial orders for the Commission's consideration. Complainants are also requested to state the date that the patents expire and the HTSUS numbers under which the accused products are imported. Complainants are further requested to supply the names of known importers of the products at issue in this investigation. The written submissions and proposed remedial orders must be filed no later than close of business on August 24, 2017. Reply submissions must be filed no later than the close of business on August 31, 2017. No further submissions on any of 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-1001") in a prominent place on the cover page and/or the first page. (See Handbook for Electronic Filing Procedures, [https://www.usitc.gov/secretary/documents/handbook\\_on\\_filing\\_procedures.pdf](https://www.usitc.gov/secretary/documents/handbook_on_filing_procedures.pdf)). Persons with questions regarding filing should contact the Secretary ((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, solely for cybersecurity purposes (all contract personnel will sign appropriate nondisclosure agreements). All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

This action is taken under the authority of 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

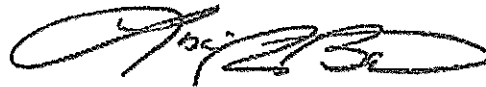
Issued: August 10, 2017



**HARDWARE AND SOFTWARE COMPONENTS  
THEREOF**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served upon the following parties as indicated on **August 10, 2017**.



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

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**PUBLIC VERSION**

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

**In the Matter of**

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

**Inv. No. 337-TA-1001**

**INITIAL DETERMINATION**

**Administrative Law Judge David P. Shaw**

Pursuant to the notice of investigation, 81 Fed. Reg. 33548 (May 26, 2016), this is the initial determination in *Certain Digital Video Receivers and Hardware and Software Components Thereof*, United States International Trade Commission Investigation No. 337-TA-1001. It is held that a violation of section 337 of the Tariff Act, as amended, has occurred 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 hardware and software components thereof, with respect to:

- U.S. Patent No. 8,006,263 and
- U.S. Patent No. 8,578,413.

It is held that a violation has not occurred with respect to:

- U.S. Patent No. 6,418,556,
- U.S. Patent No. 8,046,801,
- U.S. Patent No. 8,566,871, and
- U.S. Patent No. 8,621,512.

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## PUBLIC VERSION

### I. BACKGROUND

#### A. Institution of the Investigation

On April 6, 2016, complainants Rovi Corporation and Rovi Guides, Inc. (collectively, “Rovi”) filed a complaint alleging that respondents unlawfully import “certain digital video receivers and hardware and software components thereof” into the United States. Compl., ¶ 1.

On April 25, Rovi filed an amended complaint. The amended complaint alleged, *inter alia*, that respondents directly and/or indirectly infringe Rovi’s patents through the “importation, and/or manufacture, use, sale or lease, and/or offer for sale or lease within the United States after importation of the Accused Products[.]” Am. Compl., ¶¶ 6-7 and 110-200. The amended complaint asserted the following seven patents:

- U.S. Patent No. 6,418,556 (the “556 Patent”);
- U.S. Patent No. 8,006,263 (the “263 Patent”);
- U.S. Patent No. 8,046,801 (the “801 Patent”);
- U.S. Patent No. 8,566,871 (the “871 Patent”);
- U.S. Patent No. 8,578,413 (the “413 Patent”);
- U.S. Patent No. 8,621,512 (the “512 Patent”); and
- U.S. Patent No. 8,768,147 (the “147 Patent”).

By publication of a notice in the Federal Register on May 26, 2016, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted this investigation 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 hardware and software components thereof by reason of infringement of one or more of claims 1, 2, 5, 6, 8, 9, 11, 12, 14, 15, 17, and 18 of the ‘263 Patent; claims 1, 3, 5–10, 12, and 14–18 of the ‘413 patent; claims 1–54 of the ‘801

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patent; claims 1, 2–4, 8–16, and 20–24 of the ‘512 Patent; claims 1, 5, 6, 8, 10, 11, 15, 16, 18, and 20–24 of the ‘147 patent; claims 1, 2, 6–13, 17–24, 28–33 of the ‘871 Patent; and claims 2–4, 7, 10–14, 16, 18–22, 24, 26, 28, 30, 33, 35, 36, 39, and 40 of the ‘556 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337[.]

81 Fed. Reg. 33548 (May 26, 2016).<sup>1</sup>

The Commission named as complainants Rovi Corporation and Rovi Guides, Inc. *Id.*

The Commission named sixteen respondents that combine into three respondent groups, the

Comcast, ARRIS, and Technicolor respondents, as follows:

- The “Comcast” respondents are Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC.
- The “ARRIS” respondents are ARRIS International plc; ARRIS Group Inc.; ARRIS Technology, Inc.; ARRIS Enterprises Inc.; ARRIS Solutions, Inc.; Pace Ltd.; and Pace Americas LLC.
- The “Technicolor” respondents are Technicolor SA, Technicolor USA, Inc., and Technicolor Connected Home USA LLC.

*Id.* The Office of Unfair Import Investigations was not named as a party to the investigation. *Id.*

### **B. Procedural History Synopsis**

The administrative law judge issued the procedural schedule on July 21, 2016, which set the target date for completion of this investigation at just over 15 months, *i.e.*, August 28, 2017.

*See* Order No. 8 (Procedural Schedule) (July 21, 2016).

On September 21, 2016, Rovi moved to terminate the investigation in part as to the following asserted claims:

- The ‘556 Patent: claims 2, 4, 10, 11, 13, 16, 19–22, 24, 26, 28, 30, 33, 35, 36, and 39;

---

<sup>1</sup> The notice did not order the administrative law judge to take evidence, other information, or argument pertaining to the public interest.

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- The '263 Patent: claims 5, 6, 8, 9, 11, 12, and 18;
- The '801 Patent: claims 2-4, 6-9, 11-14, 16-27, and 29-54;
- The '871 Patent: claims 1, 2, 6-11, 13, 19-22, 24, and 30-33.
- The '413 Patent: claims 6, 7, 8, 12, 15, 16, and 17;
- The '512 Patent: claims 4, 8, 9, 11, 12, 16, 20, 21, 23, and 24; and
- The '147 Patent: claims 5, 6, 8, 10, 15, 21, 22, and 24.

The administrative law judge granted the motion in an initial determination. *See* Order No. 17 (Sep. 23, 2016), *aff'd*, Notice of Commission Determination Not to Review an Initial Determination Granting Complainants' Motion to Terminate Certain Asserted Patent Claims from the Investigation (Oct. 21, 2016).

On November 4, 2016 Rovi moved to terminate the investigation in part as to the following asserted claims:

- The '556 Patent: claims 3, 12, and 14;
- The '263 Patent: claim 15;
- The '801 Patent: claim 28;
- The '871 Patent: claims 23, 28, and 29;
- The '512 Patent: claims 2, 3, 14, and 15; and
- The '147 Patent: claim 16.

The administrative law judge granted the motion in an initial determination. *See* Order No. 25 (Nov. 14, 2016), *aff'd*, Notice of Commission Determination Not to Review an Initial Determination Granting Complainant's Motion to Terminate Certain Asserted Patent Claims from the Investigation (Dec. 2, 2016).

On November 18, 2016, Rovi moved to terminate the investigation in part as to the '147 patent. The administrative law judge granted the motion in an initial determination. *See* Order

## PUBLIC VERSION

No. 27 (Dec. 5, 2016), *aff'd*, Notice of Commission Determination Not to Review an Initial Determination Terminating U.S. Patent No. 8,768,147 from the Investigation (Dec. 28, 2016).

A prehearing conference was held on December 15, 2016, with the evidentiary hearing in this investigation beginning immediately thereafter. The hearing concluded on December 19. *See* Order No. 29 (Allocation of Time) (Dec. 5, 2016); Prehearing Tr. 1-35 (Dec. 15, 2016); Hearing Tr. 1-1376. The parties were requested to file post-hearing briefs not to exceed 400 pages, and to file reply briefs not to exceed 150 pages. Prehearing Tr. 14 (Dec. 15, 2016).

On January 9, 2017, Rovi filed its initial post-hearing brief, which asserts the following claims:

- The '556 Patent: claims 7 (based on its dependency from independent claim 3), 18 (based on its dependency from independent claim 15), and 40 (*see* Rovi Br. at 261);
- The '263 Patent: claims 1, 2, 14, 17 (*see* Rovi Br. at 42);
- The '801 Patent: claims 1, 5, 10, 15 (*see* Rovi Br. at 42);
- The '871 Patent: claims 12, 17, and 18 (*see* Rovi Br. at 202);
- The '413 Patent: claims 1, 3, 5, 9, 10, 14, 18 (*see* Rovi Br. at 42); and
- The '512 Patent: claims 1, 10, 13, and 22 (*see* Rovi Br. at 134).

Pursuant to Order No. 3 (Ground Rules), the parties also filed a joint outline of the issues to be decided in the Final Initial Determination. *See* Joint Outline of Issues to Be Decided ("Joint Outline") (EDIS Doc. ID No. 600641, filed Jan. 10, 2017).

### **C. The Private Parties**

Complainant Rovi Corporation is a Delaware corporation and has a principal place of business in San Carlos, California. *See* First Am. Compl., ¶ 11. Complainant Rovi Guides, Inc. (f/k/a Gemstar-TV Guide International Inc.) is a Delaware corporation and has a principal place

**PUBLIC VERSION**

of business in San Carlos, California. *Id.*, ¶ 12. Rovi Guides, Inc. is a wholly-owned subsidiary of Rovi Corporation. *Id.* Rovi describes itself, as follows:

[Rovi and its predecessors have] 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 IGP's 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.

First Am. Compl., ¶ 13.

Comcast is a media and technology company that is based in Philadelphia, Pennsylvania. Tr. 38-39. It is the largest cable provider in the United States. RX-0001C (Marcus WS) at Q/A 4.

ARRIS "is a telecommunications equipment manufacturing company that provides cable operators, like Comcast, with high-speed data, video, and telephony systems and products for homes and business." RX-0781C (Folk WS) at Q/A 3. Many of the ARRIS respondents maintain a presence in Suwanee, Georgia. *See* Resp. of ARRIS Respondents to First Am. Compl., ¶ 48 (EDIS Doc. ID No. 584966) (June 30, 2016). Comcast purchases certain set-top boxes from ARRIS. *Id.*; *see also* RX-0781C (Folk WS) at Q/A 6.

Technicolor has a presence in France and Indianapolis, Indiana. *See* Notice of Institution of Investigation, 81 Fed. Reg. 33548 (May 26, 2016). Technicolor manufactures products accused in this investigation and provides them to Comcast. CX-1750C (Technicolor SA's 2nd

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Supplemental Responses to Rovi's 1st Set of Interrogatories (Nos. 8, 12, 15, 20, 21, 24, 40)) at 11-13; JX-0108C (Mosely Dep.) at 21:3-17; JX-0117C (Stockton Dep.) at 39:17-20, 39:24-40:2; RX-0838C at Q/A 7.

In general, Comcast presents the respondents' collective arguments on issues that pertain to all respondents (*e.g.*, claim construction, infringement, and validity). *See generally* Resps. Br. ("Comcast" is used to refer to all respondents). When the respondents have a defense that applies to one respondent only (*e.g.*, Comcast's importation argument, Comcast's license defenses, and ARRIS's license defenses), the respondent arguing the defense is specified. *Id.*; *see also* Tr. 79 (ARRIS's counsel presented "essentially a single issue"—the ARRIS-Rovi IPG License). Technicolor does not present arguments that apply only to it. *See generally* Resps. Br.

## II. JURISDICTION AND STANDING

### A. Personal Jurisdiction

No party has contested the Commission's personal jurisdiction over it. *See* Rovi Br. at 13; *see generally* Resps. Br., Section V (personal jurisdiction is not contested). Indeed, Rovi, Comcast, ARRIS, and Technicolor all participated in discovery and appeared at the evidentiary hearing. It is found that the Commission has personal jurisdiction over all parties.

### B. Subject Matter Jurisdiction

Rovi argues that the Commission has subject matter jurisdiction because its "complaint properly alleges a violation of Section 337" and because the accused products have been imported. Rovi Br. at 13. Rovi argues that respondents "incorrectly conflate the 'commonly misunderstood' distinction between jurisdiction and proof of a violation of Section 337 on the merits." *Id.* (quoting *Certain Electronic Devices with Image Processing Systems, Components*

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*Thereof, and Associated Software*, Inv. No. 337-TA-724, Comm’n Op. (Dec. 21, 2011) (“*Electronic Devices*”)).

Comcast argues the Commission lacks jurisdiction over X1 and Legacy products imported before April 1, 2016 because “Comcast had an express patent license to [ ] Resps. Br. at 19; *see also* Rovi First Am. Compl., (the license “extended only through March 31, 2016”); CX-0001C at Q/A 28 (“the previous patent license agreement . . . was not set to expire until March 31, 2016.”). Comcast further argues that the Commission lacks jurisdiction because its activities are domestic and because aspects of software it uses “are not imported and therefore are outside the jurisdiction of section 337.” Resps. Br. at 45-50 (Section V(A)). With regard to indirect infringement, Comcast argues that “Rovi’s indirect claims for the X1 STBs fail for the same reasons as Rovi’s direct infringement claims.” *Id.* at 50. In particular, Comcast argues it “does not supply an SDK or equivalent tool for” its X1 software or the mobile applications it provides to users. *Id.* at 50-52.

Comcast’s jurisdictional arguments blur the “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.’” *See Electronic Devices* at 9-10 (quoting *Certain Cardiac Pacemakers and Components Thereof*, Inv. No. 337-TA-162, Order No. 37 (March 21, 1984)). Here, Rovi has alleged sufficient facts that, if proven, would show Respondents imported articles that infringe Rovi’s patents. *See generally* First Am. Compl., ¶¶



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110-205 (pages 32-65). Accordingly, the administrative law judge has determined that the Commission properly has jurisdiction over Rovi's complaint.<sup>2</sup>

### C. *In Rem* Jurisdiction

The Commission has *in rem* jurisdiction when infringing articles are imported, sold for importation, or sold within the United States after importation by the owner, importer, or consignee. 19 U.S.C. § 1337(a)(1)(B). "All that is required for *in rem* jurisdiction to be established is the presence of the imported property in the United States." *Certain Male Prophylactic Devices*, Inv. No. 337-TA-546, Initial Determination (June 30, 2006) (citing *Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, USITC Pub. No. 1210 (Jan. 1982), Commission Opinion at 4, 11 for the proposition that presence of *res* establishes *in rem* jurisdiction in Section 337 actions).

As discussed below, there is no dispute that the accused products are manufactured abroad and imported into the United States. Accordingly, the administrative law judge has determined that the Commission has *in rem* jurisdiction over the accused products.

### D. Importation

With respect to importation, the Commission has explained:

all that is required concerning infringement and importation is that "infringement, direct or indirect, must be based on the articles as imported." *Electronic Devices* [Inv. No. 337-TA-724, USITC Pub. No. 4374 Vol. 1, Comm'n Op. (Feb. 2013)] at 14. Thus, to the extent that the ALJ found that an imported article can only induce infringement in violation of section 337 if the article produces direct infringement on its own, and to the extent that the ALJ relied

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<sup>2</sup> For the avoidance of doubt, the administrative law judge notes the Commission's jurisdiction includes attendant issues such as whether the Commission has jurisdiction over products imported before the Rovi-Comcast Patent License expired, Rovi's direct infringement claims, and Rovi's indirect infringement claims. See Joint Outline at 3.

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upon that finding to conclude that Respondents did not violate section 337, we set aside that finding and reasoning.

*Certain Products Containing Interactive Program Guide and Parental Control Technology*, Inv.

No. 337-TA-845, Comm'n Op. at 7 (Dec. 11, 2013) ("*IPGs and Parental Controls*").

### 1. ARRIS

Rovi has alleged that ARRIS imports the accused products into the United States. Rovi Br. at 22. ARRIS admits that it imports the accused products into the United States. *See* ARRIS's Resp. to the Complaint (June 30, 2016, Rule 210.13(b) Statement); *see also* Tr. 465-466, 469-71, 558; JX-0100C (Johnson Dep. Tr.) 48; CX-1738C (ARRIS Interrog. Resp.) at 31-33; JX-0098C (Gee Dep. Tr.) 11; RX-0781C (Folk RWS) at Q/A 50 (Comcast takes title after importation); Joint Outline at 3.

Accordingly, the administrative law judge has determined that ARRIS imports the accused products that it manufactures.

### 2. Technicolor

Rovi has alleged that Technicolor imports the accused products into the United States. Rovi Br. at 23. Technicolor admits that it imports the accused products into the United States. *See* Technicolor's Aug. 1, 2016, Supplemental Rule 210.13(b) Statement; *see also* JX-0108C (Mosely Dep. Tr.) 21; CX-1749C (Technicolor Interrog. Resp.) at 24-26. As no Accused Products are manufactured in the United States, all have been imported. JX-0108C (Mosely Dep. Tr.) 21; Tr. (Shank) 558; *see also* CX-0002C (Shamos WS) at Q/A 196-98, 199.

Accordingly, the administrative law judge has determined that Technicolor imports the accused products that it manufactures.

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### 3. Comcast

Comcast argues it does 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. Resps. Br. at 8-9 (citing 19 U.S.C. § 1337(a)(1)(B)).

#### *a) Importation into the United States*

Rovi argues that Comcast is, in effect, an importer because it “heavily involved in the design and manufacture” of the accused products, as Comcast:

- Requires that the accused products adhere to its specifications and acceptability standards;<sup>3</sup>
- [ 4
- ]<sup>5</sup>
- Provides ARRIS and Technicolor with detailed technical documents [ ] such that they operate as required by Comcast within its network to provide services to Comcast subscribers.”<sup>6</sup>

See Rovi Br. at 25-27. Rovi further argues that Comcast:

- Knows the imported products are manufactured abroad and imported into the United States;<sup>7</sup>

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<sup>3</sup> Tr. (Folk) 464-65, 468-69; *see also* JX-0096C (Folk Dep. Tr.) 7-8, 32-33; JX-0098C (Gee Dep. Tr.) 16-17; JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 9.01; *see also* JX-0066C (Comcast/ARRIS Supply Agreement) at § 9.01.

<sup>4</sup> JX-0096C (Folk Dep. Tr.) 30-32.

<sup>5</sup> Tr. (Folk) 467.

<sup>6</sup> *See* CX-1316C (Comcast XG1 and XG2 HW Spec.) at 9; CX-1749C (Technicolor Interrog. Resp.) at 24-26; JX-0117C (Stockton Dep. Tr.) 17, 20-21.

<sup>7</sup> Tr. (Shank) 558; Tr. (Folk) 469-71.

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- [ ]<sup>8</sup>
- Requires ARRIS to deliver the accused products to Comcast delivery sites in the United States;<sup>9</sup>
- Requires Technicolor to deliver the accused products to Comcast delivery sites in the United States [ ]<sup>10</sup>
- [ ]<sup>11</sup>
- [ ]<sup>12</sup>
- [ ]<sup>13</sup>

*Id.* at 27-31.<sup>14</sup> Rovi further argues that [ ]

] See Rovi

Br. at 85-86.

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<sup>8</sup> Tr. (Shank) 566-67; JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 2.08.

<sup>9</sup> Tr. (Folk) 473-74; Tr. (Shank) 568-69; JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 4.01; JX-0066C (Comcast/ARRIS Supply Agreement) at § 4.01.

<sup>10</sup> JX- 0076C (Comcast/Technicolor Supply Agmt) at § 4.01 ([ ] § 5.02 ([ ]).

<sup>11</sup> JX-0080C (Comcast/ARRIS Product Supply Addendum) at § 1.06; JX-0076C (Comcast/Technicolor Supply Agmt) at § 3.07.

<sup>12</sup> JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 4.01; JX-0066C (Comcast/ARRIS Supply Agreement) at § 5.02; Tr. (Shank) 568-69; JX-0076C (Comcast/Technicolor Supply Agmt) at §§ 4.01, 5.02; Tr. (Shank) 569-70.

<sup>13</sup> RX-0838C (Shank RWS) at Q/A 57; JX-0098C (Gee Dep. Tr.) 15-16; JX-0100C (Johnson Dep. Tr.) 40; JX-0117C (Stockton Dep. Tr.) 43-44, 48-49; Tr. (Folk) 477-478; JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 3.01; JX-0066C (Comcast/ARRIS Supply Agreement) at § 3.01; Tr. (Folk) 478-79; JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 3.02; JX-0066C (Comcast/ARRIS Supply Agreement) at § 3.02.

<sup>14</sup> Rovi's reply crystalizes its argument that Comcast requires: [ ]

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Comcast argues that it is not an importer because it “does not exercise any control over the Accused Products’ importation.” Resps. Br. at 10. Comcast further argues it has not met the importation requirement because it “does not sell the accused products for importation” and because it “does not sell the accused products after importation.” Resps. Br. at 12.

Here, the evidence shows that Comcast is sufficiently involved with the design, manufacture, and importation of the accused products, such that it is an importer for purposes of Section 337. *Certain Digital Set-Top Boxes and Components Thereof*, Inv. No. 337-TA-712, USITC Pub. 4332, Initial Determination at 14-15 (June 2012) (finding the importation requirement satisfied where the respondent, Cablevision, caused the manufacture and importation of set-top boxes, even though Cablevision was not the importer of record). Indeed, the accused products are so tailored to Comcast’s system and requirements that they would not function within another cable operator’s system. *See* Tr. (Allinson) 672; JX-00096C (Folk Dep. Tr.) 30-32; JX-0117C (Stockton Dep. Tr.) 35. Further, the software at issue in the heart of this investigation is attributable squarely to Comcast.

Accordingly, the administrative law judge has determined that Comcast is an importer for purposes of Section 337.

### ***b) Sale for Importation***

Comcast argues:

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Reply at 13.

1 Rovi

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Rovi does not allege that Comcast sells for importation, and the Accused Products are already in the U.S. when Comcast purchases them. *See* RX-0838C at Q/A 34-35 (testifying that [ ] Comcast's supplier agreements show that [ ]

[ ] *See* RX-0838C at Q/A 36; JX-0116C at 70:6-72:6, 75:11-78:9, and 77:22-78:6; JX-0079C (ARRIS-Comcast MPSA) at 8-10; JX-0055C (Scientific-Atlanta-Comcast MPSA) at 8-11. Thus, there [sic] is no "sale for importation" by Comcast.

Resps. Br. at 12.

Rovi has not argued that Comcast sells the accused products for importation. *See generally* Rovi Br.; Rovi Reply.

Accordingly, the administrative law judge has determined that Comcast does not sell the accused products for importation into the United States.

### *c) Sale After Importation*

Comcast argues it does not sell the products after importation because it rents them to its customers. Resps. Br. at 12.<sup>15</sup> The "Comcast Agreement for Residential Services" contains language explaining that Comcast owns the "Comcast Equipment" and that Comcast may "remove or change the Comcast Equipment at [its] discretion at any time[.]" RX-0668C at 6-7.

Rovi argues that Comcast's distinction of sales and leases is a "technical label of the transaction between Comcast and its customers [that] does not allow Comcast to engage in unfair

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<sup>15</sup> Comcast relies upon the following: RX-0838C at Q/A 63 ("Comcast maintains ownership of CPE rented to customers, including set-top boxes, and specifically retains title to such equipment."); JX-0104C (Martin Dep. Tr.) at 12:3-13 ("[B]oxes that are installed at [Comcast's] customer sites," are "owned by Comcast"); 32:16-25 ("Customers pay Comcast a leasing fee for the access for the device," which only provides "[t]he ability for them to use the devices"); 35:19-21, 40:12-14, 44:21-23, 49:5-7 (Comcast maintains title of inventory at warehouses, hubs, and spokes); *see also* JX-0116C at 93:10-22 (Comcast "retain[s] title [to Accused Products] even when [they] go[] to the customer"); RX-0688C (Comcast Terms and Conditions) at .0007; RX-0689C (Comcast Terms and Conditions) at .0008.

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acts with impunity; these transactions are clearly the type of ‘sales after importation’ prohibited by Section 337.” Rovi Br. at 33. Rovi further argues that Comcast’s decision to charge customers who fail to return a leased set-top box also constitutes a sale. *Id.* (citing RX-0688C (Comcast Residential Agreement) at 14 (T&C (6)(b))).

In *Certain Semiconductor Devices, Semiconductor Device Packages, and Products Containing Same*, the administrative law judge determined “whether the rental of products by Comcast constitutes a sale after importation.” Inv. No. 337-TA-1010, Initial Determination at 2 (Feb. 27, 2017) (on Apr. 3, 2017, the Commission issued a notice determining not to review the ID). In *Certain Semiconductor Devices*, the administrative law judge noted that the subscriber agreement “only specifies terms for renting equipment from Comcast and never describes a transfer of property or title” and determined that the “rental of products pursuant to the Comcast subscriber agreement is not a sale after importation, and accordingly, such rentals are not violations of section 337.” *Id.* at 7.

Here, the Comcast Agreement for Residential Services does not describe a transfer of property or title (customers are obligated to “return all Comcast Equipment” once services are terminated). Thus, in light of *Certain Semiconductor Devices*, the administrative law judge has determined that the rentals of the present investigation are not violations of Section 337.

Accordingly, the administrative law judge has determined that Comcast has not sold the accused products after importation into the United States.

### **E. Standing and Ownership of the Asserted Patents**

Rovi argues that it is the exclusive assignee of all of the Asserted Patents, and has been prior to the Investigation. Rovi Br. at 10. For each patent, Rovi argues:

- U.S. Patent No. 8,006,263 issued on August 23, 2011. JX-0002 (’263 Patent) at 2. The patent was originally assigned to United Video Properties, Inc. CX-0001C

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- (Armaly WS) at Q/A 139; JX-0016 ('263 Patent Assignment History) at 429-33. United Video Properties, Inc. merged into UV Corp., which merged into TV Guide, Inc., which merged with Rovi Guides, Inc. CX-0001C (Armaly WS) at Q/A 139. The '263 Patent passed entirely to Rovi Guides, Inc. on November 25, 2014. JX-0016 ('263 Patent Assignment History) at 451. No other party possesses substantial rights to the '263 Patent.
- U.S. Patent No. 8,578,413 issued on November 5, 2013. JX-0005 ('413 Patent) at 2. The patent was originally assigned to United Video Properties, Inc. CX-0001C (Armaly WS) at Q/A 145; JX-0019 ('413 Patent Assignment History) at 2-6. United Video Properties, Inc. merged into UV Corp., which merged into TV Guide, Inc., which merged with Rovi Guides. See CX-0001C (Armaly WS) at Q/A 145. The '413 Patent passed to Rovi Guides, Inc. on November 25, 2014. JX-0019 ('413 Patent Assignment History) at 109. No other party possesses substantial rights to the '413 Patent.
  - U.S. Patent No. 8,046,801 issued on October 25, 2011. JX-0003 ('801 Patent) at 2. The patent was originally assigned to United Video Properties, Inc. CX-0001C (Armaly WS) at Q/A 151; JX-0017 ('801 Patent Assignment History) at 429-33. United Video Properties, Inc. merged into UV Corp., which merged into TV Guide, Inc., which merged with Rovi Guides, Inc. CX-0001C (Armaly WS) at Q/A 151. The '801 Patent passed entirely to Rovi Guides, Inc. on November 25, 2014. JX-0017 ('801 Patent Assignment History) at 451. No other party possesses substantial rights to the '801 Patent.
  - U.S. Patent No. 8,621,512 issued on December 31, 2013. JX-0006 ('512 Patent) at 2. The patent was originally assigned to United Video Properties, Inc. CX-0001C (Armaly WS) at Q/A 157; JX-0020 ('512 Patent Assignment History) at 2-5. United Video Properties, Inc. merged into UV Corp., which merged into TV Guide, Inc., which merged with Rovi Guides, Inc. CX-0001C (Armaly WS) at Q/A 157. The '512 Patent passed entirely to Rovi Guides, Inc. on November 25, 2014. JX-0020 ('512 Patent Assignment History) at 108. No other party possesses substantial rights to the '512 Patent.
  - U.S. Patent No. 8,566,871 issued on October 22, 2013. JX-0004 ('871 Patent) at 2. The patent was originally assigned to StarSight Telecast, Inc. See CX-0001C (Armaly WS) at Q/A 169; JX-0018 ('871 Patent Assignment History) at 234-39. StarSight Telecast, Inc. merged into Rovi Guides, Inc. CX-0001C (Armaly WS) at Q/A 169. The '871 Patent passed entirely to Rovi Guides, Inc. on November 25, 2014. JX-0018 ('871 Patent Assignment History) at 441. No other party possesses substantial rights to the '871 patent.
  - U.S. Patent No. 6,418,556 issued on July 9, 2002. See JX-0001 (the '556 Patent). The patent was originally assigned to News America Publishing, Inc. and Tele-Communications of Colorado, Inc. See CX-0001C (Armaly WS) at Q/A 175; JX-0015 ('556 Patent Assignment History) at 2-10. News America Publishing, Inc.



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assigned its rights to New America Publications, Inc., which changed its name to TV Guide Magazine Group, which assigned its rights to TV Guide, Inc. CX-0001C (Armaly WS) at Q/A 175. TV Guide Inc. assigned its rights to United Video Properties, Inc., which merged with Rovi Guides, Inc. Id. Tele-Communications of Colorado, Inc. assigned its rights to TCI-TCGOS, Inc., which merged into UV Corp., which merged into TV Guide, Inc., which merged into Rovi Guides, Inc. Id. The '556 Patent passed entirely to Rovi Guides, Inc. on November 25, 2014. JX-0015 ('556 Patent Assignment History) at 509. No other party possesses substantial rights to the '556 Patent.

Respondents have not presented any argument on this issue. *See* Joint Outline at 1; *see generally* Resps. Br. (the issue is not contested).

The administrative law judge has determined that Rovi has standing to bring its complaint in this investigation.

### III. GENERAL PRINCIPLES OF LAW

#### A. Claim Construction

Claim construction begins with the plain language of the claim.<sup>16</sup> 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.<sup>17</sup> *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (*en banc*), *cert. denied*, 546 U.S. 1170 (2006).

In some instances, claim terms do not have particular meaning in a field of art, and claim construction involves little more than the application of the widely accepted meaning of

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<sup>16</sup> Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

<sup>17</sup> Factors that may be considered when determining the level of ordinary skill in the art include: "(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

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commonly understood words. *Phillips*, 415 F.3d at 1314. “In such circumstances, general purpose dictionaries may be helpful.” *Id.*

In many cases, claim terms have a specialized meaning, and it is necessary to determine what a person of skill in the art would have understood the disputed claim language to mean. “Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to ‘those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.’” *Phillips*, 415 F.3d at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). The public sources identified in *Phillips* include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.* (quoting *Innova*, 381 F.3d at 1116).

In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Phillips*, 415 F.3d at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff’d*, 517 U.S. 370 (1996). The specification is, however, always highly relevant to the claim construction analysis, and is usually dispositive. *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). 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.

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Claims are not necessarily, and are not usually, limited in scope to the preferred embodiment. *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed. Cir. 2003); *Decisioning.com, Inc. v. Federated Dep't Stores, Inc.*, 527 F.3d 1300, 1314 (Fed. Cir. 2008) (“[The] description of a preferred embodiment, in the absence of a clear intention to limit claim scope, is an insufficient basis on which to narrow the claims.”). Nevertheless, claim constructions that exclude the preferred embodiment are “rarely, if ever, correct and require highly persuasive evidentiary support.” *Vitronics*, 90 F.3d at 1583. Such a conclusion can be mandated in rare instances by clear intrinsic evidence, such as unambiguous claim language or a clear disclaimer by the patentees during patent prosecution. *Elektá Instrument S.A. v. O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1308 (Fed. Cir. 2000); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319 (Fed. Cir. 2002).

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, and includes inventor testimony, expert testimony, and learned treatises. *Phillips*, 415 F.3d at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is 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. Extrinsic evidence may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

For claims involving functional language, the Federal Circuit has explained that

Construction of a means-plus-function limitation includes two steps. “First, the court must determine the claimed function. Second, the court must identify the corresponding structure in the written description of the patent that performs the function.”

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*Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir.2006) (internal citations omitted).

*Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012)

### **B. Representative Products**

A single product may be representative of multiple products when the “products operate similarly with respect to the claimed limitation.” *Spancion, Inc. v. Int’l Trade Comm’n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010); *see also TiVo, Inc. v. EchoStar Commc’ns Corp.*, 516 F.3d 1290, 1308 (Fed. Cir. 2008) (“there is nothing improper about an expert testifying in detail about a particular device and then stating that the same analysis applies to other allegedly infringing devices that operate similarly, without discussing each type of device in detail.”); *Kaneka Corp. v. SKC Kolon PI, Inc.*, 198 F. Supp. 3d 1089, 1119 (C.D. Cal. 2016) (“A patentee can prove infringement by showing that just ‘some samples’ or even ‘a sample’ of the product is found to meet all the limitations of a patent’s claims.”). The complainant bears the burden of showing that the representative product behaves in a manner similar to the products it represents. *See Spancion*, 629 F.3d at 1332 (“Appellants contend that the ALJ improperly shifted the burden to Appellants to establish that the non-modeled accused packages would behave differently than those that were modeled. Rather than improper burden shifting, the ALJ properly found that Appellants simply failed to rebut the substantial evidence set forth by Tessera.”); *L & W, Inc. v. Shertech, Inc.*, 471 F.3d 1311, 1318 (Fed. Cir. 2006) (the “burden of proof on infringement . . . falls on Shertech, the patentee”); *see also Network Protection Sciences, LLC v. Fortinet, Inc.*, 2013 WL 5402089, \*2-\*4 (N.D. Cal. 2013) (denying defendant’s motion for summary judgment of no infringement where the defendant argued the plaintiff should have provided claim charts for each individual accused product).

**C. Infringement**

**1. Direct Infringement**

Under 35 U.S.C. §271(a), direct infringement consists of making, using, offering to sell, or selling a patented invention without consent of the patent owner. The complainant in a section 337 investigation bears the burden of proving infringement of the asserted patent claims by a “preponderance of the evidence.” *Certain Flooring Products*, Inv. No. 337-TA-443, Comm’n Notice of Final Determination of No Violation of Section 337, 2002 WL 448690, at \*59, (Mar. 22, 2002); *Enercon GmbH v. Int’l Trade Comm’n*, 151 F.3d 1376 (Fed. Cir. 1998).

Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly.<sup>18</sup> *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. “Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21 (1997) (citing *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605,

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<sup>18</sup> 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). If an accused device lacks a limitation of an independent claim, the device cannot infringe a dependent claim. See *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

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609 (1950)). “The determination of equivalence should be applied as an objective inquiry on an element by element basis.”<sup>19</sup> *Id.* at 40.

“An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused device ‘performs substantially the same function in substantially the same way to obtain the same result’ as the claim limitation.” *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); accord *Absolute Software*, 659 F.3d at 1139-40.<sup>20</sup>

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex*, 419 F.3d at 1382. In particular, “[t]he doctrine of prosecution history estoppel limits the doctrine of equivalents when an applicant makes a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner.” *Id.* (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1344 (Fed. Cir. 2005)).

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<sup>19</sup> “Infringement, whether literal or under the doctrine of equivalents, is a question of fact.” *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1130 (Fed. Cir. 2011).

<sup>20</sup> “The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge.” *Warner Jenkinson*, 520 U.S. at 36.

## 2. Indirect Infringement

### a) Induced Infringement

Section 271(b) of the Patent Act provides: “Whoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b).

“To prevail on a claim of induced infringement, in addition to inducement by the defendant, the patentee must also show that the asserted patent was directly infringed.” *Epcon Gas Sys. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033 (Fed. Cir. 2002). Further, “[s]ection 271(b) covers active inducement of infringement, which typically includes acts that intentionally cause, urge, encourage, or aid another to directly infringe a patent.” *Arris Group v. British Telecomm. PLC*, 639 F.3d 1368, 1379 n.13 (Fed. Cir. 2011). The Supreme Court held that “induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement.” *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 766 (2011). The Court further held: “[g]iven the long history of willful blindness and its wide acceptance in the Federal Judiciary, we can see no reason why the doctrine should not apply in civil lawsuits for induced patent infringement under 35 U.S.C. § 271(b).” *Id.* at 768 (footnote omitted).<sup>21</sup>

### b) Contributory Infringement

Section 271(c) of the Patent Act provides: “Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or

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<sup>21</sup> “While the Courts of Appeals articulate the doctrine of willful blindness in slightly different ways, all appear to agree on 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. We think these requirements give willful blindness an appropriately limited scope that surpasses recklessness and negligence.” *Global-Tech*, 563 U.S. at 769.

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especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.” 35 U.S.C. § 271(c).

Section 271(c) “covers both contributory infringement of system claims and method claims.”<sup>22</sup> *Arris*, 639 F.3d at 1376 (footnotes omitted). To hold a component supplier liable for contributory infringement, a patent holder must show, *inter alia*, that (a) the supplier’s product was used to commit acts of direct infringement; (b) the product’s use constituted a material part of the invention; (c) the supplier knew its product was especially made or especially adapted for use in an infringement” of the patent; and (d) the product is not a staple article or commodity of commerce suitable for substantial non-infringing use. *Id.*

### D. Patent Eligibility

Whether patent claims are directed to subject matter that is patentable under 35 U.S.C. § 101 is an issue of law. *CLS Bank Int’l v. Alice Corp Pty.*, 717 F.3d 1269, 1276 (2013) (*en banc*) (citing *Bancorp Servs., LLC v. Sun Life Assurance Co. of Can.*, 687 F.3d 1266, 1273 (Fed. Cir. 2012)). “While there may be cases in which the legal question as to patentable subject matter may turn on subsidiary factual issues,” a patentee must clearly identify the fact issues that must be resolved in order to address patentability. *See In re Comiskey*, 554 F.3d 967, 975 (Fed. Cir. 2009). The Commission has explained:

[T]he law remains unsettled as to whether the presumption of patent validity under 35 U.S.C. § 282 applies to subject matter eligibility challenges under 35 U.S.C. § 101.”

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<sup>22</sup> “Claims which recite a ‘system,’ ‘apparatus,’ ‘combination,’ or the like are all analytically similar in the sense that their claim limitations include elements rather than method steps. All such claims can be contributorily infringed by a component supplier.” *Arris*, 639 F.3d at 1376 n.8.



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*Certain Portable Elec. Devices & Components Thereof*, Inv. No. 337-TA-994, Initial Determination, (Aug. 19, 2016) (quoting Notice of Commission Determination (1) to Review an Initial Determination Granting Respondents’ Motion for Summary Determination that Certain Asserted Claims are Directed to Ineligible Subject Matter Under 35 U.S.C. § 101; and (2) on Review to Affirm the Initial Determination with Modification, Inv. No. 337-TA-963 (Apr. 4, 2016) at 2).

Section 101 of the Patent Act sets forth four categories of patentable inventions: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.” 35 U.S.C. §101; *see also Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015). The Supreme Court has recognized three exceptions to 35 U.S.C. § 101, holding ineligible for patenting “[l]aws of nature, natural phenomena, and abstract ideas.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714 (Fed. Cir. 2014), *cert denied. sub nom. Ultramercial, LLC v. WildTangent, Inc.*, 135 S. Ct. 2907 (2015) (quoting *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014)) (“*Alice*”). “Patents that merely claim well-established, fundamental concepts fall within the category of abstract ideas.” *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 Fed. App’x 988, 991 (Fed. Cir. 2014) (citing *Bilski v. Kappos*, 561 U.S. 593, 611-12 (2010)).

An invention, however, “is not rendered ineligible for patent simply because it involves an abstract concept.” *Alice*, 134 S. Ct. at 2354 (citing *Diamond v. Diehr*, 450 U.S. 175, 187 (1981)). The courts have recognized that “[a]t some level,’ all inventions . . . embody, use

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reflect, rest upon, or apply laws of nature, natural phenomena or abstract ideas.” *Ultramercial*, 772 F.3d at 715 (quoting *Alice*, 134 S. Ct. at 2354).

To identify claims that are ineligible, the Supreme Court has articulated a two-step test. *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1374 (Fed. Cir. 2016). In the first step, the court must decide whether a claim is drawn to an abstract idea. *Id.* (citing *Alice*, 134 S. Ct. at 2355). If the patent claims an abstract idea, the court in the second step seeks to identify an “‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 134 S. Ct. at 2357 (quoting *Mayo Collaborative Servs. v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289, 1294, 1298 (2012) (“*Mayo*”). The claim limitations must disclose additional features indicating more than “well-understood, routine, conventional activity.” *Mayo*, 132 S. Ct. at 1292. The limitations must “‘narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself.’” *Cyberfone*, 558 Fed. App’x at 992 (quoting *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013), *cert. denied*, 134 S. Ct. 2871 (Jun. 30, 2014)).

Configuring a standard, computerized system to implement an abstract idea does not make the claimed configuration patent-eligible. Manipulation of abstractions on a computer “‘cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances.’” *Ultramercial*, 772 F.3d at 717 (quoting *In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008)); *see also Bancorp Servs.*, 687 F.3d at 1278, *cert. denied*, 134 S. Ct. 2870 (2014) (“[A]dding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible.”) (quoting *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012)).

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Claims that are not merely drawn to abstract ideas implemented by the use of computers, however, may be eligible. Specifically, claims directed to improving computer functioning by the use of unconventional methods may appropriately be patented. See *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (“[W]e find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.”).

Indeed, the use of generic computer technology, however “specific” to the particular environment, will not provide eligibility, if the functionality described constitutes an abstract idea. See *TLI Commc’ns LLC v. AV Auto., LLC*, 823 F.3d 607, 611 (Fed. Cir. 2016) (“*TLF*”) (holding that 35 U.S.C. § 101 applies where “the specification makes clear that the recited physical components merely provide a generic environment in which to carry out the abstract idea of classifying and storing digital images in an organized manner”).

In *TLI*, the Federal Circuit considered and held invalid a method for uploading digital photos from a mobile device. *TLI*, 823 F.3d at 609. The Federal Circuit clarified that a relevant inquiry under step one is “whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea.” *Id.* at 612 (quoting *Enfish*, 822 F.3d at 1335). The Circuit contrasted claims “directed to an improvement in the functioning of a computer with claims ‘simply adding conventional computer components to well-known business practices . . . or ‘generalized steps to be performed on a computer using conventional computer activity.’” *Id.* (quoting *Enfish*, 822 F.3d at 1338).

### **E. Validity**

One cannot be held liable for practicing an invalid patent claim. See *Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). Nevertheless, each claim of

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a patent is presumed to be valid, even if it depends from a claim found to be invalid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986).

A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption by “clear and convincing” evidence of invalidity. *Checkpoint Systems, Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

### 1. Anticipation

Anticipation under 35 U.S.C. § 102 is a question of fact. *z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). Section 102 provides that, depending on the circumstances, a claimed invention may be anticipated by variety of prior art, including publications, earlier-sold products, and patents. *See* 35 U.S.C. § 102 (e.g., section 102(b) provides that one is not entitled to a patent if the claimed invention “was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States”).

The general law of anticipation may be summarized, as follows:

A reference is anticipatory under § 102(b) when it satisfies particular requirements. First, the reference must disclose each and every element of the claimed invention, whether it does so explicitly or inherently. *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1375 (Fed. Cir. 2006). While those elements must be “arranged or combined in the same way as in the claim,” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed. Cir. 2008), the reference need not satisfy an *ipsissimis verbis* test, *In re Bond*, 910 F.2d 831, 832 33 (Fed. Cir. 1990). Second, the reference must “enable one of ordinary skill in the art to make the invention without undue experimentation.” *Impax Labs., Inc. v. Aventis Pharms. Inc.*, 545 F.3d 1312, 1314 (Fed. Cir. 2008); *see In re LeGrice*, 49 C.C.P.A. 1124, 301 F.2d 929, 940-44 (1962). As long as the reference discloses all of the claim limitations and enables the “subject matter that falls within the scope of the claims at issue,” the reference anticipates -- no “actual creation or reduction to practice” is required. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1380-81 (Fed. Cir. 2003); *see In re*

*Donohue*, 766 F.2d 531, 533 (Fed. Cir. 1985). This is so despite the fact that the description provided in the anticipating reference might not otherwise entitle its author to a patent. *See Vas Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562 (Fed. Cir. 1991) (discussing the “distinction between a written description adequate to support a claim under § 112 and a written description sufficient to anticipate its subject matter under § 102(b)”).

*In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

## 2. Obviousness

Under section 103 of the Patent Act, a patent claim is invalid “if 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 to which said subject matter pertains.”<sup>23</sup> 35 U.S.C. § 103. While the ultimate determination of whether an invention would have been obvious is a legal conclusion, it is 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) objective evidence of nonobviousness.” *Eli Lilly and Co. v. Teva Pharmaceuticals USA, Inc.*, 619 F.3d 1329 (Fed. Cir. 2010).

The objective evidence, also known as “secondary considerations,” includes commercial success, long felt need, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). “[E]vidence arising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Secondary considerations, such as commercial success, will

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<sup>23</sup> The standard for determining whether a patent or publication is prior art under section 103 is the same as under 35 U.S.C. § 102, which is a legal question. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).

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not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007) (commercial success did not alter conclusion of obviousness).

“One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *KSR*, 550 U.S. at 419-20. “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.*

Specific teachings, suggestions, or motivations to combine prior art may provide helpful insights into the state of the art at the time of the alleged invention. *Id.* at 420. Nevertheless, “an 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.” *Id.* “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* A “person of ordinary skill is also a person of ordinary creativity.” *Id.* at 421.

Nevertheless, “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); *see KSR*, 550 U.S. at 416 (a combination of elements must do more

than yield a predictable result; combining elements that work together in an “unexpected and fruitful manner” would not have been obvious).<sup>24</sup>

### 3. Written Description

The issue of whether a patent is invalid for failure to meet the written description requirement of 35 U.S.C. § 112, ¶ 1 is a question of fact. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 670 F.3d 1171, 1188 (Fed. Cir. 2012). A patent’s written description must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed. The test for sufficiency of a written description is “whether the disclosure of the application relied upon reasonable conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)).

### 4. Indefiniteness

The definiteness requirement of 35 U.S.C. § 112 ensures that the patent claims particularly point out and distinctly claim the subject matter that the patentee regards to be the invention. *See* 35 U.S.C. § 112, ¶ 2; *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366 (Fed. Cir. 2004). If a claim’s legal scope is not clear enough so that a person of ordinary skill in the art could determine whether or not a particular product infringes, the claim is indefinite, and is, therefore, invalid. *Geneva Pharm., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1384 (Fed. Cir. 2003).<sup>25</sup>

Thus, it has been found that:

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<sup>24</sup> Further, “when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 52 (1966)).

<sup>25</sup> Indefiniteness is a question of law. *IGT v. Bally Gaming Int’l, Inc.*, 659 F.3d 1109 (Fed. Cir. 2011).

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When a proposed construction requires that an artisan make a separate infringement determination for every set of circumstances in which the composition may be used, and when such determinations are likely to result in differing outcomes (sometimes infringing and sometimes not), that construction is likely to be indefinite.

*Halliburton Energy Servs. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008).

The Supreme Court addressed the issue of indefiniteness, and stated that a finding of indefiniteness should not be found if the claims, “viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014) (“*Nautilus*”).

A patent is not indefinite if the claims, “viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2124. “If, after a review of the intrinsic and extrinsic evidence, a claim term remains ambiguous, the claim should be construed so as to maintain its validity.” *Certain Consumer Electronics and Display Devices with Graphics Processing and Graphics Processing Units Therein*, Inv. No. 337-TA-932, Order No. 20 (Apr. 2, 2015) (quoting *Phillips*, 415 F.3d at 1327).

The burden is on the accused infringer to come forward with clear and convincing evidence to prove invalidity. See *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1344 (Fed. Cir. 2007) (“A determination that a patent claim is invalid for failing to meet the definiteness requirement in 35 U.S.C. § 112, ¶ 2 is a legal question reviewed de novo.”).

### **F. Domestic Industry**

A violation of section 337(a)(1)(B), (C), (D), or (E) can be found “only if an industry in the United States, with respect to the articles protected by the patent, copyright, trademark, mask



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work, or design concerned, exists or is in the process of being established.” 19 U.S.C.

§ 1337(a)(2). Section 337(a) further provides:

(3) For purposes of paragraph (2), an 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).

These statutory requirements consist of an economic prong (which requires certain activities)<sup>26</sup> and a technical prong (which requires that these activities relate to the intellectual property being protected). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm’n Op. at 13 (May 16, 2008) (“*Stringed Musical Instruments*”). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm’n Op. at 5 (July 22, 2011) (“*Navigation Devices*”).

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<sup>26</sup> The Commission practice is usually to assess the facts relating to the economic prong at the time that the complaint was filed. See *Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-560, Comm’n Op. at 39 n.17 (Apr. 14, 2010) (“We note that only activities that occurred before the filing of a complaint with the Commission are relevant to whether a domestic industry exists or is in the process of being established under sections 337(a)(2)-(3).” (citing *Bally/Midway Mfg. Co. v. U.S. Int’l Trade Comm’n*, 714 F.2d 1117, 1121 (Fed. Cir. 1983)). In some cases, however, the Commission will consider later developments in the alleged industry, such as “when a significant and unusual development occurred after the complaint has been filed.” See *Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, Comm’n Op., at 5-6 (Jan. 20, 2012) (“[I]n appropriate situations based on the specific facts and circumstances of an investigation, the Commission may consider activities and investments beyond the filing of the complaint.”).

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### 1. Economic Prong

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that “whether a complainant has established that its investment and/or employment activities are significant with respect to the articles protected by the intellectual property right concerned is not evaluated according to any rigid mathematical formula.” *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337 TA 690, Comm’n Op. at 27 (Feb. 17, 2011) (“*Printing and Imaging Devices*”) (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm’n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines “the facts in each investigation, the article of commerce, and the realities of the marketplace.” *Id.* “The determination takes into account the nature of the investment and/or employment activities, ‘the industry in question, and the complainant’s relative size.’” *Id.* (citing *Stringed Musical Instruments* at 26).

With respect to section 337(a)(3)(C), whether an investment in domestic industry is “substantial” is a fact-dependent inquiry for which the complainant bears the burden of proof. *Stringed Musical Instruments* at 14. There is no minimum monetary expenditure that a complainant must demonstrate to qualify as a domestic industry under the “substantial investment” requirement of this section. *Id.* at 25. There is no need to define or quantify an industry in absolute mathematical terms. *Id.* at 26. Rather, “the requirement for showing the existence of a domestic industry will depend on the industry in question, and the complainant’s relative size.” *Id.* at 25-26.

### 2. Technical Prong

“With respect to section 337(a)(3)(A) and (B), the technical prong is the requirement that the investments in plant or equipment and employment in labor or capital are actually related to

‘articles protected by’ the intellectual property right which forms the basis of the complaint.” *Stringed Musical Instruments* at 13-14. “The test for satisfying the ‘technical prong’ of the industry requirement is essentially same as that for infringement, *i.e.*, a comparison of domestic products to the asserted claims.” *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). “With respect to section 337(a)(3)(C), the technical prong is the requirement that the activities of engineering, research and development, and licensing are actually related to the asserted intellectual property right.” *Stringed Musical Instruments* at 13.

#### IV. THE ASSERTED PATENTS

##### A. U.S. Patent No. 6,418,556

##### 1. Overview of the ‘556 Patent (JX-0001)

The ‘556 Patent, entitled “Electronic television program guide schedule system and method,” issued on July 9, 2002. The application that would issue as the ‘556 Patent, Application No. 08/119,367, was filed on September 9, 1993. The ‘556 Patent is the parent of dozens of issued patents and abandoned applications. *See* RDX-0902 (presenting a “family tree” showing numerous patents and applications that claim priority to the ‘556 Patent); *see also* U.S. Patent No. 9,319,735 at 1 (showing multiple patents that claim priority to Application No. 08/119,367). The ‘556 Patent discloses a system for displaying an interactive program guide (which may be abbreviated “IPG”) and viewed program in an overlaid relationship.

Comcast has introduced the ‘556 Patent as a “Browse Mode” patent. *See* Tr. 37.

##### 2. Claim Construction

##### a) *Level of Ordinary Skill in the Art*

Rovi’s entire argument is:

A person of ordinary skill in the art relevant to the ‘556 Patent would have a bachelor’s degree in electrical or computer

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engineering or computer science, or equivalent experience, and two to four years of experience relating to electronic content delivery, such as experience with cable or satellite television systems, set-top boxes, multimedia systems, or electronic program guides. CX-0004C (Delp WS) at Q/A 42-44.

Rovi Br. at 262-63.

In a heading, Comcast reports that this issue is not disputed. *See* Resps. Br. at 294.

However, the subsequent text argues:

One of ordinary skill in the art would have had a bachelor's degree in computer science, computer engineering, electrical engineering or the equivalent thereof, and 3-5 years of experience in software development in the 1990-93 time frame, or equivalent industry experience. RX-0005C (Grimes WS) at Q/A 11. Rovi's pre-hearing brief does not dispute this recitation of the level of skill in the art. The parties also agree that certain terms recited in the Asserted Claims are not in dispute. *See* Resps. PreHB at 700-01.

*Id.*

In view of the expert testimony and consensus between the parties, the administrative law judge has determined that a person having ordinary skill in the relevant art would have a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline and two to four years of experience or familiarity with cable or satellite television systems, set-top boxes, multimedia systems, or electronic program guides.

***b) Agreed Claim Terms***

The parties have submitted agreed constructions for multiple claim terms, as follows:

Claim Term	Agreed Construction
1. Partial overlaying relationship	with covered-in-part or covering-in-part relationship with
2. Partial overlay on covering-in-part over	covering-in-part over

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Claim Term	Agreed Construction
3. User control means for choosing . . . and transmitting . . .	<p><b>Function:</b> The function(s) include: “Choosing user control commands” and “transmitting signals in response thereto.”</p> <p><b>Structure:</b> “Remote control(ler), remote control(ler) receiver, infrared (IR) receiver, or keypad.”</p>
4. “data processing means” terms	The parties have agreed that these terms are subject to § 112(6), but disagree on the constructions.
5. “display generator” terms	The parties have agreed that these terms are subject to § 112(6), but disagree on the constructions.

See Joint Outline at 20.<sup>27</sup>

*c) Disputed Claim Terms*

In footnote 40, with regard to the disputed claim terms, Comcast states that “[t]hese terms, the relevant claims, and the parties’ proposed constructions are provided at Resp. PreHB at 701-66. See RDX-0912-14, 1405-07, 1409, 1420-21, 1433-35 (RX-0209).” Resps. Br. at 294, n.40. Comcast’s many references to its pre-hearing brief and demonstrative exhibits (here, RDX-0912-14, 1405-07, 1409, 1420-21, 1433-35 (RX-0209)) are improper incorporations by reference. See Pre-Hr’g Tr. 14. It is unclear why Comcast would refer to a demonstrative image rather than directly state and argue a proposed claim construction in its brief.

*(1) Preambles*

Rovi explains that it “asserts Claims 7(3), 18(15) and 40 against the Respondents’ accused products. CX-0004C (Delp WS) at Q/A 6.” Rovi Br. at 261. Claims 3, 15, and 40 have preambles that recite an “electronic programming guide.” The preamble of claim 3 further

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<sup>27</sup> EDIS Doc. ID No. 600641, filed Jan. 10, 2017.

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includes “a television receiver having a plurality of television channels.” These terms are addressed separately.

### (a) *Electronic programming guide*

The term “electronic programming guide” appears in the asserted claims and only in the claims. The parties have proposed the following:

<b>Rovi’s Preamble Proposal</b>	<b>Comcast’s Preamble Proposal</b>
<p><b><u>Claims 3 and 15:</u></b> This term is part of a preamble, which is not limiting. To the extent this term appears in the body of the claim, no construction is necessary. Alternatively, “an electronic television program schedule system.”</p> <p><b><u>Claim 40:</u></b> This term is part of a preamble, which is not limiting. No construction is necessary.</p>	<p>“In view of the intrinsic evidence, a POSITA at the time of would have interpreted this term as Comcast proposes, <i>i.e.</i>, limited to a guide implemented by application software at a user site, which is the only possible architecture or structure described in the ‘556 patent.”</p>

See Rovi Br. at 204-05; Resps. Br. at 295.

Rovi argues:

The term “electronic program guide” appears in the preamble of each asserted claim. Corrected Joint ID of Disputed Claim Terms, Mot. Dkt. No. 1001-008 at 12 (Aug. 17, 2016) (“Joint ID”). First, the parties dispute whether this term is limiting. It is not. “Electronic programming guide” does not appear in the body of the claim; it only appears in the preamble. It is not necessary to “breath life” into any asserted claim. Rather, each of the limitations standing alone defines the asserted claims, which contain all elements necessary for the invention. Accordingly, the term need not be construed. *TomTom, Inc. v. Adolph*, 790 F.3d 1315, 1324 (Fed. Cir. 2015).

If the term is limiting, the parties also dispute the meaning. “Electronic programming guide” is used in its plain and ordinary sense as “an electronic television program schedule system.” Joint ID at 12. In other words, it is the guide that appears on the screen

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with the hardware and software that makes it work (regardless of where the software and hardware physically resides). Delp Tr. 1012-15; CX-0004C (Delp WS) at Q/A 53. This is hardly in dispute. When shown a screen shot of Comcast's "mini-Guide," Comcast's own expert, Dr. Grimes, admitted that the screen shot showed an "electronic program guide." Grimes Tr. 1047 (referencing RDX-1444C and CDX-0607 at 2). As part of its defense that the Comcast program guide exists only as an application in the "cloud," Comcast asserts that the term in the '556 patent is limited to "a television guide system implemented by application software at a user site"—effectively excluding any program guide with software functionality located on a server. This makes no sense. Servers containing program guide software always have been used to send program guide listing information to a set-top box—there is no other place for the guide listings to originate. Thus, Comcast's proposed construction narrows the definition of an "electronic programming guide" in a manner inconsistent with the plain and ordinary meaning without any support from the intrinsic evidence. CX-0004C (Delp WS) at Q/A 53-54.

Rovi Br. at 264-65.

Comcast argues:

In view of the intrinsic evidence, a POSITA at the time of would have interpreted this term as Comcast proposes, *i.e.*, limited to a guide implemented by application software at a user site, which is the only possible architecture or structure described in the '556 patent. RX-0848C at Q/A 37-43. No distributed implementation for an EPG is described in, nor would have been enabled by, the '556 patent, which explains that:

Physically, these system components can be located in a user's set-top cable converter box or other signal reception or processing device such as a satellite receiver. Alternatively, the component can be mounted in a separate housing, or included as part of a television receiver, VCR, personal computer, or multimedia player.

JX-0001 at 6:30-38. Each of these described locations is at the user site; no description of an EPG located anywhere remote from the user (for example in the cloud) is provided. *Id.* at, *e.g.*, FIGS. 1-2; 6:66-7:10; 7:17-47; 8:38-48. Other statements in the specification, *id.* at 3:56-60, 6:57-60 (emphases added) confirm the invention was an EPG implemented at the user site:

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It is another object of the present invention to provide an electronic guide system that provides a reliable and efficient method of updating or replacing the *application software programs* that *implement the [EPG] at the user site*.

[A]ccording to the present invention, the transmitted data stream may contain *application software* for *implementing the [EPG] at the user site*.

In contrast, a POSITA at the time of the alleged invention would not have understood how to implement the claimed EPG remotely, *i.e.*, without application software running the EPG functions located at the user site. RX-0848C at Q/A 40. Rovi's expert Dr. Delp did not provide testimony explaining how Rovi's construction encompassing a distributed implementation was supported, let alone enabled, by the '556 patent.

Resps. Br. at 295-96 (emphasis in original); *see also* RX-0840C at Q/A 39 ("for the '556 Patent, there is simply no support whatsoever, anywhere in the specification or the file history of the '556 Patent, for an EPG being located anywhere other than at a user site."<sup>28</sup> Such an implementation, *circa* 1992 or 1993, would not have been so well known and easy to implement that it need not even be mentioned in the specification, let alone left unexplained.").

Rovi replies:

Terms used in the preamble are limiting only when necessary to give life, meaning, and vitality to the claimed invention—in this case, an electronic program guide. *See Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). It is plain from each asserted claim that the "electronic program guide for use with a television receiver" is defined by the detailed limitations that follow the preamble, and nothing more. There is no textual reason for supplementing the detailed limitations defining the claimed electronic program guide with a separate, independent definition of "electronic program guide" standing alone. Respondents argue that the preamble must be limiting because the terms "serve as antecedent bases" for phrases used

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<sup>28</sup> "EPG" is an acronym for "electronic program guide." Comcast characterizes EPGs as "passive" guides, where viewers watched rolling program listings on a dedicated channel. *See* Resps. Br. at 2.



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later in the body of the claims. Resps. Br. at 294-96. But this rule only applies where a preamble term acts as a “necessary component of the claimed invention.” *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2013). Here, an “electronic program guide for use with a “television receiver” is not a “necessary component” of the invention, it is the claimed invention. As such the preamble functions as a statement of intended use, which is not limiting even when the body of the claim uses the preamble as an antecedent basis. See *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1375-76 (Fed. Cir. 2001).

Respondents seek to supplement the detailed limitations defining the claimed electronic program guide with a requirement that it also be located “at the user site” by importing that limitation from the specification. According to Respondents, EPGs operating at a user site differ from EPGs maintaining some guide hardware and software on servers. Resps. Br. at 291. Even if the term requires separate construction, a person skilled in the art would understand the term to be the guide on a screen and the hardware and software needed to make it work—regardless of where the components are located. Delp Tr. 1012-15; CX-0004C (Delp WS) at Q/A 53.

Rovi Reply at 103-04.

Comcast replies:

Claim preambles are limiting if they provide antecedent basis for terms in the bodies of the claims. *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003). Rovi’s Pre-Hearing Brief fails to argue that the preamble was not limiting, and that argument is waived. GR 7(c). Rovi’s argument that specific terms within the preamble are not limiting—see Compl. PoHB at 264-65 (2<sup>nd</sup> ¶ of “electronic programming guide”); *id.* at 265-66 (2<sup>nd</sup> ¶ of “television receiver”)—were not set forth in detail in the Pre-Hearing Brief, and should also be deemed waived.

Rovi incorrectly asserts that “[t]he term ‘electronic programming guide’ does not appear in the body of the claim; and therefore, does not need to be construed.” *Id.* at 869. Rather, the recitations of “*electronic programming guide*” in the preambles provide the only antecedent bases for the recitation of “*said programming guide*” in the bodies of Claims 3 and 15. See Resp. PoHB at 294 & n. 41. Rovi is also not correct that the preamble of claim 3, which recites “a television receiver having a plurality of television channels,” is not a limitation. Compl. PoHB at 265. As the file

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history shows, the Asserted Claims were specifically amended to add additional functionality directed to TV tuning functionality and to display on a TV, to distinguish from prior art cited by the Examiner involving computer displays. *See* RX-0848C (Grimes RWS) at 82; RDX-0926-39 (JX-0008). Rovi's expert Dr. Delp confirmed this at trial. Tr. 1007:4-1008:6; 1012:3-14.

Resps. Reply at 102-03 (footnote omitted).

The administrative law judge has determined that the preamble term "electronic programming guide" is limiting.

The preamble's "electronic programming guide" is the antecedent basis for the "said programming guide" recited in claims 3 and 15. *See Eaton Corp. v. Rockwell Int'l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) ("When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention."). The body of claim 40 does not explicitly refer to an "electronic programming guide." However, claims 3, 15, and 40 recite "guide channel-control and guide time-control commands" and "said guide control commands," which refer to the electronic programming guide. The use of guide control commands without a corresponding guide is illogical. Thus, the preambles are necessary to bring completeness and meaning to the claimed electronic programming guides.

The administrative law judge construes "electronic programming guide" to mean "a guide implemented by application software at a user site."

Rovi's construction simply substitutes "electronic programming guide" with "an electronic television program schedule system." The term "electronic television program schedule system" is not used in the claims or specification. Rovi's explanation of this new term is that the EPG system "is the guide that appears on the screen with the hardware and software that makes it work (regardless of where the software and hardware physically resides)[,]" and

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that “a person skilled in the art would understand the term to be the guide on a screen and the hardware and software needed to make it work—regardless of where the components are located” recasts the term in pure functional language and does not have any support in the specification. *See* Rovi Br. at 264; Rovi Reply at 104.

Comcast’s proposed construction, on the other hand, has ample support throughout the specification and does not broaden the patent after it has issued.

*(b) a television receiver having a plurality of television channels*

The phrase “a television receiver having a plurality of television channels” appears in the preamble of claims 1-4, 11, 12, 20, and 41-43. The parties have proposed the following:

<b>Rovi’s Preamble Proposal</b>	<b>Comcast’s Preamble Proposal</b>
<p>This phrase (as part of the preamble) is not limiting. Rather, it simply describes the environment in which the limitations exist. . . . Because claim 3’s preamble is not limiting, the phrase “a television receiver having a plurality of television channels” does not need to be construed.</p> <p>To the extent this phrase is limiting, it still need not be construed because it is used in its plain and ordinary sense.</p>	<p>Comcast does not clearly set forth its proposal in its post-hearing brief.</p>

*See* Rovi Br. at 265; Resps. Br. at 296.

Rovi argues:

The phrase “a television receiver having a plurality of television channels” appears only in the preamble of [asserted] claim 3. Joint ID at 13. This phrase (as part of the preamble) is not limiting. Rather, it simply describes the environment in which the limitations exist. *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). Because claim 3’s preamble is not limiting, the phrase “a television receiver having a plurality of television channels” does not need to be construed. *TomTom, Inc.*, 790 F.3d at 1324.

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To the extent this phrase is limiting, it still need not be construed because it is used in its plain and ordinary sense. A television receiver with multiple television channels is something every child knows. There is no technical meaning. It is simply a device that receives and displays video received over the air, through a cable or by satellite. CX-0004C (Delp WS) at Q/A 55. Such a device has an ability to tune to different television channels. *Id.* Comcast's proposed construction requires the receipt of a particular type of television signal—an NTSC television signal. But nothing in the intrinsic evidence limits a television receiver to the receipt of NTSC television signals. *Id.* at Q/A 55-56. Thus, Comcast's request to limit the meaning to a particular embodiment disclosed in the specification should be rejected. *Superguide Corp. v. DirecTV Enters.*, 358 F.3d 870, 881 (Fed. Cir. 2004) (holding that a "regularly received television signal" means "video data that is customarily received by the television viewing public," including "an analog signal" and "a digital signal" even though the patent specification only disclosed NTSC-type analog television signals).

Rovi Br. at 265-66.

Comcast argues:

Rovi has not proposed a competing construction of this term. As discussed, this term is part of the preamble of claim 3, and is limiting because it recites essential structure for the claim and provides antecedent bases for terms recited in the claim body. Comcast's proposal is consistent with the plain meaning of this term, and the understanding of a POSITA at the time of the invention. *See* RX-0848C (Grimes RWS) at Q/A 34-36.

Resps. Br. at 296-97.

Rovi replies:

. . . Respondents do not dispute that the patent uses "television receiver" in its plain and ordinary sense. Resps. Br. at 296.

Rovi Reply at 104.

The administrative law judge has determined that the phrase "a television receiver having a plurality of television channels" does not need to be construed. The phrase merely describes one aspect of the environment that facilitates the electronic programming guide. It does not

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recite essential structure, as Comcast argues, nor is there any reason for adding the “NTSC” limitation from the specification into the claims.

### (2) *Memory means for storing . . .*

The phrase “memory means for storing” is only used in the claims. For reference, the full text for the “memory means for storing . . .” phrases follows:

- Claim 3: “memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels[.]” JX-0001 at 24:17-19;
- Claim 15: “memory means for storing television program schedule information[.]” JX-0001 at 28:8-9; and
- Claim 40: “memory means for storing television program schedule information[.]” JX-0001 at 36:37-38.

The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
Rovi contends that the “memory means” is not subject to 35 U.S.C. § 112, para. 6.	Rovi contends that the “memory means” is subject to 35 U.S.C. § 112, para. 6.  <i>Function:</i> “storing program schedule information”  <i>Structure:</i> “(DRAM) and then-existing equivalents”

See Rovi Br. at 266; Resps. Br. at 309-10.

Rovi’s argument for this phrase follows:

The asserted claims all recite a “memory means for storing television program schedule information . . . .” Joint ID at 21. Rovi contends that the “memory means” is not subject to 35 U.S.C. § 112, para. 6. CX-0004C (Delp WS) at Q/A 78-79. It is well settled that the presence of the word “means” does not automatically make the words that follow subject to § 112, para. 6. *Sage Prods. v. Devon Indus.*, 126 F.3d 1420, 1427-28 (Fed. Cir. 1997) (finding that, where a claim limitation uses the term “means” and “recites a function, but then goes on to elaborate

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sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format”); *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999) (holding that a district court erred in construing a “positioning means for moving said transducer means” as a “means-plus-function” limitation). Further, the function of the “memory means” recited in the claim itself—“storing television program schedule information”—contains sufficient “structure” to perform the recited function, making § 112(6) inapplicable. *TecSec, Inc. v. Int’l Business Machines Corp.*, 731 F.3d 1336, 1347-48, (Fed. Cir. 2013) (ruling that “system memory means” does not invoke § 112(6) because it “is sufficient structure to perform the ‘storing data’ function. To those skilled in the art, a system memory is a specific structure that stores data.”).

Even if “memory means” is subject to § 112, para. 6, the corresponding structure in the specification is a “memory” and equivalents thereof. Joint ID at 21. At the time of the invention, memory was a particular device with a well understood meaning. CX-0004C (Delp WS) at Q/A 78-79, 80. The specification discloses three memories that store program schedule information: ROM (17), DRAM (18) and non-volatile memory EEPROM (20). CX-1903C (Delp RWS) at Q/A 32-33.

Rovi Br. at 266-67; *see also* Joint Identification of Disputed Claim Terms, Ex. A at 21

(proposing a construction of “memory”).

Comcast argues that the terms are subject to § 112, ¶ 6:

... The term “a memory”—without reciting any such “means” and without any reciting any associated function—appears in recited by other claims of the ‘556 patent, such as the since-dropped Claim 12. In contrast, these disputed terms instead recite a “memory means” for performing the particular function of “storing program schedule information,” which gives rise to the presumption that these terms are subject to 112(6). *Id.* at 88. The Doctrine of Claim Differentiation confirms that the “memory means for storing program schedule information” recited in the Asserted Claims has a different scope from “a memory” recited in Claim 12, *i.e.*, “the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.” *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72. Thus, it is presumed (and Rovi has not rebutted the presumption) that these terms cover the

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means for storing program schedule information disclosed in the ‘556 patent (DRAM) and then-existing equivalents. See RX-0848C at Q/A 88.

...

As the ‘556 patent explains, “microcontroller 16 uses the received program schedule information to build a database by storing the data in appropriately organized records in dynamic random access memory (DRAM) 18.” JX-0001 at 7:3-6; *see also* 8:3-9. Other types of memory discussed in the ‘556 patent had different uses, such as storing the bootstrap operating software. *See id.* at 6:67-7:3....

Resps. Br. at 309-311 (emphasis in original; argumentative subheadings omitted; footnote omitted).<sup>29</sup> Comcast identifies DRAM (18) as the proper structure. *See* Resps. Br. at 311; JX-0001 at 8:4-17.

The administrative law judge has determined that the “memory means for storing . . .” clauses are means-plus-function phrases subject to 35 U.S.C. § 112, ¶ 6. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (*en banc*) (“The converse presumption remains unaffected: ‘use of the word “means” creates a presumption that § 112, ¶ 6 applies.’” (quoting *Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 703 (Fed. Cir. 1998))). Rovi has not overcome the presumption that the patentee’s use of the word “means” did not invoke § 112, ¶ 6, particularly where the patentee used the lone word “memory” in claim 12. *See id.*

The administrative law judge has determined that the function contemplated by the “memory means for storing . . .” phrases is to store programming information. Additionally, the

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<sup>29</sup> Comcast cites to RX-0848C (Grimes RWS) at Q/A 88, which mistakenly cites to RDX-1521 rather than RDX-1421. Comcast’s reference to RDX-1521 (and RDX-1421) is an improper incorporation by reference. *See* Pre-Hr’g Tr. 14. It is unclear why Comcast would refer to an expert’s witness statement that in turn cites a demonstrative image rather than directly state and argue a proposed claim construction in its brief.

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administrative law judge has determined that the corresponding structure for this function is: ROM (17), DRAM (18) and non-volatile memory EEPROM (20). *See CX-1903C (Delp RWS) at Q/A 32-33.*

(3) *Program schedule information is stored in said memory means . . .*

The parties brief this phrase along with the “memory means for storing” phrase above. *See Joint Outline at 20-21.* Accordingly, the administrative law judge has determined it is not necessary to construe this phrase separately.

(4) *Display generator . . . for displaying . . .*

The phrases “video display generator . . . for displaying . . .” and “program schedule display generator . . . for displaying . . .” are only used in the claims. For reference, the full text for the phrases follows:

- Claim 3: “a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide[.]” JX-0001 at 24:26-34.
- Claim 15: “a program schedule display generator coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means[.]” JX-0001 at 28:16-28.
- Claim 40: “a program schedule display generator coupled to said data processing means and said memory means for displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and



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consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed.” JX-0001 at 36:45-60.

### (a) *Proposed Functions*

Rovi identifies the following function for the three phrases:

receiving video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for *a currently tuned channel* in overlaying relationship with another display signal currently appearing on said channel in at least one mode of operation of said programming guide.

Rovi Br. at 267 (emphasis added on text that differs from the claim language; Rovi also omits the word “tuned” from “said tuned channel”).

Comcast does not directly propose a functionality in its post-hearing brief. Rather, Comcast argues what the structure must be able to do:

A 112(6) equivalent structure must provide the recited functionality: other than the Video Overlay Device 25 disclosed in Figs. 1-2 and accompanying text, the specification of the ‘556 patent describes no structure *capable of providing the overlay or simultaneous display functionality*. *Id.*; see Tr. 1104:2-1105:16.

See Resps. Br. at 300.

### (b) *Proposed Structures*

Rovi identifies the corresponding structure as “a video graphics card.” See Rovi Br. at 267 (“The structure corresponding to these functions is a video graphics card and equivalents thereof.”).

Comcast identifies the corresponding structure as:

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The structure corresponding to these means is the Video Display Generator 23 (“VDG”), which, as shown in Fig. 1 and detailed further in Fig. 2, includes 2 substructures: RGB Video Generator 24 and a Video Overlay Generator 25. *Id.* at Q/A 36; RDX-0908-09 (JX-0001 Figs. 1-2). JX-0001 at 8:12-17, 20-29[.]

*See Resps. Br. at 299-300.*

Rovi argues:

The asserted claims recite a “video display generator” in various formats. Claim 7(3) recites a “video display generator adapted to receive video control commands . . . .” Claim 18(15) recites “a program schedule display generator . . . for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information . . . .” Finally, claim 40 recites “a program schedule display generator . . . for displaying, simultaneously with said display signal, user-selected portions of said schedule information . . . .” The parties agree that these limitations are subject to 35 U.S.C. § 112, para. 6. Joint ID at 23. In the asserted claims, the function of this clause is:

receiving video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a currently tuned channel in overlaying relationship with another display signal currently appearing on said channel in at least one mode of operation of said programming guide.

*Id.* In claim 40, the function requires a simultaneous display relationship rather than an overlaying relationship. The structure corresponding to these functions is a video graphics card and equivalents thereof. *Id.*; JX-0001 (‘556 Patent) at col. 8, lns. 3-19, col. 8, lns. 41-42; CX-0004C (Delp WS) at Q/A 72-74. The specification also discloses a “video display generator” in figure 1 that performs these functions. . . .

*Rovi Br. at 267-69.*

Comcast argues:

. . . The structure corresponding to these means is the Video Display Generator 23 (“VDG”), which, as shown in Fig. 1 and detailed further in Fig. 2, includes 2 substructures: RGB Video

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Generator 24 and a Video Overlay Generator 25. *Id.* at Q/A 36; RDX-0908-09 (JX-0001 Figs. 1-2). JX-0001 at 8:12-17, 20-29:

The VDG includes a standard RGB video generator 24, which takes the digital program schedule information sent by the microcontroller 16 and converts it to an RGB format in accordance with the bit map for the particular screen display then being presented to the user on the [TV] receiver 27. . . . The VDG also includes a Video Overlay Device 25, which accepts the RGB video input, as well as an input from conventional television tuner 28, such as a conventional tuner manufactured by General Instrument, which supplies a program signal in standard NTSC video format. The overlay device 25 converts and combines the RGB signal with the signal from the tuner 28, and produces a composite NTSC output signal containing both the program signal and the program schedule information, as shown in FIG. 2.

The '556 patent does not describe any other structure capable of performing all of the recited functions of the display generator. RX-0005C at Q/A 36-37. A 112(6) equivalent structure must provide the recited functionality: other than the Video Overlay Device 25 disclosed in Figs. 1-2 and accompanying text, the specification of the '556 patent describes no structure capable of providing the overlay or simultaneous display functionality. *Id.*; see Tr. 1104:2-1105:16.

The '556 patent refers to "a commercially available VGA-type graphics card, such as a Rocgen card manufactured by Roctec" (JX-0001 at 8:10-12) as an example of structure corresponding to the recited display generator. But a generic "video graphics card" known to a POSITA at that time, operating on a standard PC, would not have been able to accept a NTSC input, mix a NTSC input with an RGB video input, or generate a composite NTSC output. RX-0005C at Q/A 37-38. Thus, Rovi's proposal of "video graphics card" cannot be the corresponding structure (or a known equivalent) for the display generator element because such a generic "video graphics card," by itself, would not have been able to generate the required overlay of computer graphics on a live TV signal. *Id.*; Tr. 1104:14-1105:16. At most, a video card would have corresponded only to the RGB video generator substructure (element 24) of the VDG, not the entire display generator itself. *Id.* . . .

Resps. Br. at 209-302 (footnote omitted).

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Rovi replies:

. . . Respondents further argue that the specification structure corresponding to the “display generator” cannot include the “video graphics card” described in the specification. JX-0001 (‘556 Patent) at col. 8, lns. 38-42. But Respondents’ argument is premised on two incorrect assumptions. First, Respondents wrongly assume that the corresponding structure must include inputs and outputs described in the specification—namely “RGB video” and “VGA-type” inputs, and an “NTSC signal” output. But none of these inputs and outputs are part of the recited function. Under § 112(6), functional language must be construed exactly as recited in the claim. . . . Second, Respondents argue that a “video graphics card” cannot be the corresponding structure because, according to Dr. Grimes, such cards were incapable of mixing computer graphics with video. Grimes Tr. 1084. But, as demonstrated by Dr. Delp, such video graphics cards capable of mixing were not only known in the art, they were widely advertised. . . .

Finally, Respondents ignore the interchangeability test for equivalents. *See IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1436 (Fed. Cir. 2000). Applying this test, Dr. Delp confirmed that, at the time of the invention, a video display generator and video graphics card were interchangeable. CX-1903C (Delp RWS) at Q/A 43.

Rovi Reply at 105-06 (citations omitted).

### (c) *Construction: Function*

The administrative law judge construes the function expressed in the phrases in accordance with their plain and ordinary meaning, which is the claim language itself.

Accordingly, the administrative law judge construes the phrases, as follows:

Claim Language	Function
<b>Claim 3:</b> “a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said	displaying interactively-selected successive portions of said

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<b>Claim Language</b>	<b>Function</b>
schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide[.]” JX-0001 at 24:26-34.	schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide[.]

<b>Claim Language</b>	<b>Function</b>
<b>Claim 15:</b> “a program schedule display generator coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means[.]” JX-0001 at 28:16-28.	displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means[.]

<b>Claim Language</b>	<b>Function</b>
<b>Claim 40:</b> “a program schedule display generator coupled to said data processing means and said memory means for displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information	displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information

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<b>Claim Language</b>	<b>Function</b>
being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed.” JX-0001 at 36:45-60.	being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed[.]

Rovi has not sufficiently explained why it is prudent to substitute “a currently tuned channel” for the actual language that appears in claim 3: “a set of channels, including ones different from a currently tuned channel[.]” The same applies for claims 15 and 40. Further, Rovi’s construction simply lifts, verbatim, language from claim 2. Rovi’s proposed construction, which is offered without an acknowledgement that there are no substantive differences between its claims, conflicts with claim differentiation’s general tenets. *See Starhome GmbH v. AT & T Mobility LLC*, 743 F.3d 849, 857-58 (Fed. Cir. 2014) (“The doctrine of claim differentiation is ‘based on the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.’”); *see also Wi-LAN USA, Inc. v. Apple Inc.*, 830 F.3d 1374, 1391 (Fed. Cir. 2016) (“The doctrine of claim differentiation provides a presumption that differently worded claims cover different claim scope. This doctrine finds root in the legal canon of construction against superfluity. A construction that would cause two differently worded claims to cover exactly the same claim scope would render one of the claims superfluous, so we apply a presumption against such constructions.”).

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### (d) Construction: Structure

The administrative law judge has identified the video display generator (VDG) 23, which includes RGB video generator 24 and Video Overlay Device 25, as corresponding to the claimed functions. JX-0001 at 8:6-36 provides:

in conjunction with other downloaded data types such as stored bit maps for the screen configuration and the graphic symbol or logo displays stored in non-volatile memory 20 or, alternatively, in DRAM 18, supplies it to a video display generator (VDG) 23, which in the present embodiment may be a commercially available VGA-type graphics card, such as a Rocgen card manufactured by Roctec. The VDG includes a standard RGB video generator 24, which takes the digital program schedule information sent by the microcontroller 16 and converts it to an RGB format in accordance with the bit map for the particular screen display then being presented to the user on the television receiver 27. The configuration of each screen is shown and discussed in greater detail in the System Operation section below. [JX-0001 at 8:6-19.]

The VDG also includes a Video Overlay Device 25, which accepts the RGB video input, as well as an input from conventional television tuner 28, such as a conventional tuner manufactured by General Instrument, which supplies a program signal in standard NTSC video format. The 25 overlay device 25 converts and combines the RGB signal with the signal from the tuner 28, and produces a composite NTSC output signal containing both the program signal and the program schedule information, as shown in FIG. 2. This composite video signal is supplied to a modulator 26, shown 30 in FIG. 1, which can be a modulator such as available from Radio Shack, and then to the television receiver 27, which the user keeps tuned to the modulated channel, for example, channel 3 or 4. The composite video signal can also be supplied directly to the television receiver 27 or other receiving device from the VDG through a video port 25A on the VDG. [JX-0001 at 8:20-36.]

*See also EON Corp. IP Holdings LLC v. AT & T Mobility LLC*, 785 F.3d 616, 623 (Fed. Cir.

2015) (“The disclosure of structure under § 112 ¶ 6 serves the ‘purpose of limiting the scope of the claim to the particular structure disclosed, together with equivalents.’”); *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1170 (Fed. Cir. 2015) (“The scope of a means-plus-function

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limitation is outlined not by what the specification and prosecution history do not say, but rather by what they do say.”). The remainder of the parties’ arguments pertains to infringement, which is addressed separately.

### (5) “Data processing means” phrases

The “data processing means” phrases are only used in the claims. The full text for the “data processing” phrases in claim 3 follows:

***data processing means for*** receiving said signals in response to said user control commands; and

... [the display generator phrase is omitted] ...

***said data processing means controlling*** said video display generator with said video control commands in response to said user control commands to display each said portion of program schedule information for any chosen one of said television programs for a predetermined display period in partial overlaying relationship with another display signal currently being received on said television receiver;

each said portion being displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means, ***said data processing means being responsive*** to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlaid portion of said schedule information.

JX-0001 at 24:24-52 (emphasis added).

The full text for the “data processing” phrases in claim 15 follows:

***data processing means for*** receiving said signals in response to said user control commands; and

... [the display generator phrase is omitted] ...

***said data processing means controlling*** said program schedule display generator to also selectively display reminder selection messages in at least one mode of operation of said programming



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guide, for allowing said user to choose selection commands in response to said reminder selection messages for selecting a reminder associated with a chosen future program, each said selected reminder message also to be displayed on said display at a predetermined time prior to the time of occurrence of each chosen future one of said television programs, said reminder message being displayed in overlaying relationship with another display signal being displayed at said time said reminder message is displayed.

JX-0001 at 28:14-43 (emphasis added).

The full text for the “data processing” phrases in claim 40 follows:

***data processing means for*** receiving said signals in response to said user control commands; and

a program schedule display generator coupled to said data processing means and said memory means for displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, ***said data processing means being responsive*** to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed.

JX-0001 at 36:43-60 (emphasis added).

### (a) *Proposed Functions*

Rovi’s argument for three “data processing means” phrases follows:

Asserted claims 7(3), 18(15) and 40 of the ‘556 Patent all recite one or two “data processing means” limitations, which the parties agree are subject to construction under 35 U.S.C. § 112, para. 6. Joint ID at 3-4, 10-11; JX-0001 (‘556 Patent) at col. 24, lns. 24-25, 36-52, col. 36, lns. 43-44, 57-60.

While the recited functions of the “data processing means” have slight variation in wording, the means perform the following functions in each claim:

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- receiving signals in response to user control commands;
- responding to the user control commands; and
- controlling a video display generator

See Rovi Br. at 269-70.

For the same three “data processing means” phrases, Comcast argues:

The parties agree these are means-plus-function terms subject to 35 U.S.C. § 112(6), but disagree on the constructions. See RDX-01433-35 (RX-0209). Comcast asserts that each of these terms is indefinite because the written description fails to provide the requisite structure; the only disclosed structure is a general purpose processor, and no code or algorithms are disclosed. . . .

See Resps. Br. at 297. Comcast has not presented, in its post-hearing brief, the claim construction it would have the administrative law judge consider.

### *(b) Proposed Structures*

For the three “data processing means” phrases, Rovi argues:

The structure corresponding to these functions is disclosed in the specification as a microcontroller 16 programmed to perform the algorithms disclosed in JX-0001 (‘556 Patent) at Fig. 36A, and at col. 6, ln. 66 - col. 7, ln. 22, col. 7, lns. 34-46, col. 8, lns. 3-37, col. 8, lns. 49-67, col. 10, lns. 23-24, col. 10, ln. 66 - col. 11, ln. 15, and col. 12, ln. 49 - col. 13, ln. 4. CX-0004C (Delp WS) at Q/A 48. Equivalent structures could include essentially any computer, data processor, microprocessor, or state machine that can receive a command signal and respond. CX-1903C (Delp RWS) at Q/A 53. This is undisputed. . . .

See Rovi Br. at 269-272.

For the same three “data processing means” phrases, Comcast argues:

. . . The only disclosed structure capable of performing the recited functions is “Microcontroller 16,” a general-purpose processor, such as a M68000EC and any then-existing known equivalent structures. JX-0001 at FIG. 1; RX-0005C at Q/A 47 & 57; RX-0848C at Q/A 93-94. . . .

See Resps. Br. at 297-99 (emphasis in original).

(c) *Construction: Function*

The administrative law judge finds that the function recited by the data processing means-plus-function phrases is:

- receiving signals in response to user control commands;
- responding to the user control commands; and
- controlling a video display generator.

The above functions comport with the claim language, and neither expand nor narrow the claim language. *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1319 (Fed. Cir. 2003) (A “claimed function may not be improperly narrowed or limited beyond the scope of the claim language. . . . Conversely, neither may the function be improperly broadened by ignoring the clear limitations contained in the claim language. The function of a means-plus-function claim must be construed to include the limitations contained in the claim language.” *Id.* (citation omitted); *see also Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001) (a “court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function.”).

(d) *Construction: Structure*

The administrative law judge has identified “a microcontroller” as the structure that corresponds to the claimed functions. *Compare* Rovi Br. at 269<sup>30</sup> *with* Resps. Br. at 297.<sup>31</sup> The

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<sup>30</sup> Rovi argues: “The structure corresponding to these functions is disclosed in the specification as **a microcontroller 16** programmed to perform the algorithms disclosed in JX-0001 (‘556 Patent) at Fig. 36A, and at col. 6, ln. 66 - col. 7, ln. 22, col. 7, lns. 34-46, col. 8, lns. 3-37, col. 8, lns. 49-67, col. 10, lns. 23-24, col. 10, ln. 66 - col. 11, ln. 15, and col. 12, ln. 49 - col. 13, ln. 4. CX-0004C (Delp WS) at Q/A 48. Equivalent structures could include essentially any computer, data processor, microprocessor, or state machine that can receive a command signal and respond. CX-1903C (Delp RWS) at Q/A 53. This is undisputed.” Rovi Br. at 269 (emphasis added).

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remainder of the parties' disagreement pertains to infringement and invalidity, and is not discussed here.

(6) *One mode of operation of said programming guide*

The phrase “one mode of operation of said programming guide” appears only in the claims (*i.e.*, claims 1-5, 15, 17, 20, 23, 25, and 39); the phrase “mode of operation” appears throughout the claims and specification. The parties have proposed the following constructions:

Rovi's Proposed Construction	Comcast's Proposed Construction
No construction is necessary. Alternatively, one configuration of said programming guide.	“The parties dispute whether this term need be construed as well as the proper construction of this term. RDX-1409 (RX-0209). In view of the intrinsic evidence, a POSITA would have understood that the recited “one mode” of operation refers to “Browse Mode,” which is the only “mode” described in the ‘556 patent that contains <i>a simultaneous display or overlay of program schedule information with another video signal with the recited navigation and tuning functions.</i> ”

See Rovi Br. at 273-74; Resps. Br. at 302 (emphasis added).<sup>32</sup>

Rovi argues:

No construction is necessary of the claim phrase “one mode of operation of said programming guide” as it carries its plain and ordinary meaning in claim 3 as “one configuration of said programming guide.” Joint ID at 14; CX-0004C (Delp WS) at Q/A 57. Comcast does not dispute the plain and ordinary meaning of “one mode of operation of said programming guide,” but

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<sup>31</sup> Comcast argues: “The only disclosed structure capable of performing the recited functions is ‘*Microcontroller 16*,’ a general-purpose processor, such as a M68000EC and any then-existing known equivalent structures.” Resps. Br. at 297 (bold and italics added).

<sup>32</sup> Comcast’s pre-hearing brief argued that the construction should be, “[a] selectable display format for viewing program schedule information for only one program listing.” See Comcast Pre-Hr’g Br. at 736

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incorrectly contends the inventors disavowed part of the scope of the phrase during prosecution. CX-0004C (Delp WS) at Q/A 58. Respondents contend the “one mode of operation of said programming guide” is limited to a “browse mode” of operation and then construe that phrase to mean “a selectable display format for viewing program schedule information for only one program listing.” Joint ID at 14.

The inventors did not disavow the plain and ordinary scope of “one mode of operation of said programming guide” such that it narrowly covers only a “browse mode” of operation. During prosecution, the Examiner rejected the claims based on prior art showing a “static guide” in an overlay relationship with a television program signal. The inventors responded by pointing out that the invention did not merely display program guide information in an overlay relationship with a television program, but instead displayed a television signal in partial overlay with a guide having interactive functionality—including the ability to scroll through different time periods and channels, tune to different programs from the guide, set reminders, etc. JX-0008 (‘556 Patent File History) at 13-14, 443-47, 688-90, 820-22, 939, 1029-37, 1130-34, 1184-89. Although the inventors used the short-hand term “browse” to describe these features, they did not limit the invention to a “browse” mode of operation. They simply pointed out that the claims did not cover static guides overlaid with program information—something that the claim language regarding the video display generator means also makes clear.

Even if the Commission finds disavowal such that “one mode of operation of said programming guide” is limited to “browse mode,” further limiting “browse mode” to the display of only one program listing is unwarranted. CX-0004C (Delp WS) at Q/A 59-65. In contravention of settled rules, this would limit the term to the figures disclosed in the specification. *Hill-Rom Servs. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014).

Rovi Br. at 273-74. Rovi then argues that the claims should not be limited to “browse mode” because the patent does not define that term, claim 19 uses the term flexibly, and that “browse mode,” at the time of the invention, was understood to mean a mode of operation “that displayed one or more programs on one or more channels across at least one or more time slots.” *Id.*

Comcast argues:

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The parties dispute whether this term need be construed as well as the proper construction of this term. RDX-1409 (RX-0209). In view of the intrinsic evidence, a POSITA would have understood that the recited "one mode" of operation refers to "Browse Mode," which is the only "mode" described in the '556 patent that contains a simultaneous display or overlay of program schedule information with another video signal with the recited navigation and tuning functions. RX-0848C at Q/A 44 & 70; *see* JX-0001 at 11:20-13:14. Each Asserted Claim is limited to this Browse Mode, based on the '556 patent specification and repeated disclaimers in the file history. *Id.* All the '556 patent describes regarding this Browse Mode is an interactively navigable single program listing partially overlaying another video signal; the program listing can be changed in time and/or channel, but nothing beyond a single program listing is ever displayed. RX-0848C at Q/A 45; *see* RDX-0944 & 1410-15 (JX-0001).

...

The Applicant characterized Browse Mode as being the principal invention of the Asserted Claims on multiple occasions. RX-0848C at Q/A 55. In a Response to the March 6, 1996 Office Action, the Applicant amended the pending claims in view of the Examiner's citation of overlaying display of information from multiple sources, as shown by applications on the Windows operating system. *Id.* This amendment was in response to the Examiner's remark, at the interview discussing the rejection, that without such amendments, the pending claims were obvious "in view of computer-based application programs (such as those that operate in the Windows operating system), in combination with the other prior art of record." *Id.* In that same Response, the Applicant explained that the alleged invention of the '556 patent recited in the pending claims was the "so-called 'Browse' mode of operation" permitting a user to browse listings on other channels and/or other times while continuing to view the current program. *Id.*; *see* RDX-1416 (JX-0008).

In the Response filed on May 20, 1997, the Applicant further reiterated its position, stating that the Examiner "correctly point[ed] out" that the combination of recited prior art references disclosed displaying program schedule information in a partial overlaying display format. As shown in RDX-1417 (JX-0008), Applicant reiterated that "the principal invention of the claims remaining in the present application" was directed to "the so-called 'Browse' mode of operation" that enabled interactive navigating through listing information without disturbing the content of the

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program being viewed. The Applicant further admitted that the prior art cited by the Examiner taught providing schedule information in an overlay with the currently appearing program or display signal, thus conceding that the only difference between the prior art and what was allegedly invented was the added interactive navigation via the overlaying program schedule information. JX-0008.1029-31; RX-0848C at Q/A 58.

....

“Browse Mode” is the *only* “mode” described in the ‘556 Patent providing a simultaneous display or partial overlay of program schedule information with another video signal that also permits the recited interactive navigation and tuning functionality described in the ‘556 patent and recited by the Asserted Claims. *Id.*; see JX-001 at 11:20-13:14; RDX-0944 (JX-0001) & 1418 (JX-0001). In each instance where more than one program listing is depicted in the specification of the ‘556 patent, there is no overlay of a TV signal. RX-0848C (Grimes RWS) at Q/A 47. Rather, all of the figures showing more than one program listing lack any overlay as required for the recited “one mode of operation” and thus are not in Browse Mode. *Id.*; JX-0001 at FIGS 6 & 6A, 8, 10, 15-20 & 25; see RDX-1418 (JX-0001).

Nor is there any textual description in the ‘556 patent supporting a Browse Mode having multiple program listings. RX-0848C at Q/A 48. The ‘556 patent thus constantly teaches that only one listing for one particular channel is shown at a time in this “one mode of operation”. *Id.*; JX-0001 at 11: 44-54, 12:19-30, 35-48. In conjunction with the figures being described, this is evident from the description of “either the prior or next channel” being displayed, which confirms that only one channel is presented at a time in the overlay. RX-0848C at Q/A 48-49. Moreover, the description of viewing program schedule information for a future time in Figure 12A confirms that only one timeslot is presented at a time in the overlay. *Id.* Accordingly, a POSITA would have understood that this “one mode of operation” with an overlay or simultaneous display did not involve the display of multiple program listings, but was limited to a single listing. *Id.*

In fact, the ‘556 patent description of Browse Mode’s tuning and time change operations teaches away from multiple program listings. *Id.* at 54; see also JX-0001 at 12:1-7. A POSITA would have understood the description to exclude multiple program listings, because among other deficiencies, they do not identify a cursor or any other way of identifying for the tuner which of the hypothetical multiple listings is to be selected. RX-0848C at Q/A

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54. In short, the functionality of “simply depress[ing] the ENTER button” to tune to a channel would make no sense with multiple program listings; such a one button selection would only work with a single program listing at any given time. *Id.* Thus, the ‘556 patent provides no written description for the required “one mode of operation” having an overlay containing multiple program listings.

....

In contrast to Dr. Delp’s unsupported statements regarding a “general understanding” of Browse Mode, the relevant extrinsic evidence confirms that if there was any “general understanding” of “Browse Mode,” it was limited to a display of a single program listing. RX-0848C at Q/A 64-66. Literature for other IPGs in the relevant time frame—including from Prevue, another Rovi-acquired entity—are consistent in using “Browse Mode” as only referring to a single program listing in the partial overlay at the bottom of the TV display. *Id.* Mr. Lemmons, Rovi’s 30(b)(6) witness on issues related to development of the invention, testified that United Video Properties (the original assignee of the ‘556 patent) and Prevue each independently developed their own Browse Mode. JX-0102C (Lemmons Dep. Tr.) at 155:10-156:10. Both companies applied the same terminology to this same feature, which contained only a single program listing in the partial overlay. RX-0848C at Q/A 66; RDX-1403C (RX-0073C & JC-0102)

*See* Resps. Br. at 302-308 (footnotes omitted; emphasis in original).

Rovi replies that Comcast has read a “browse mode” limitation into the claims, which unduly narrows the claims’ scope, that non-asserted claims 19 and 38 recite a browse mode that “allows for either a display of multiple program listings or one program listing,” and that inventor declarations showing an “instant rolling log” must be included within “browse mode.” *See* Rovi Reply at 108-110.

In reply, Comcast argues that the applicant limited the asserted claims to browse mode and that the “public is entitled to rely on Applicant’s clear descriptions of the “principal invention of the claims remaining” as being the “Browse” mode of operation, whether alone or



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combined with reminder functionality,” that Rovi’s position ignores the specification, that the instant rolling log cannot “provide support that is absent from or a scope beyond the specification,” and that “browse mode” did not have a generally understood meaning. *See* Resps. Reply at 110-113.

The administrative law judge construes “one mode of operation of said programming guide” to mean “a simultaneous display or overlay of program schedule information with another video signal with the recited navigation and tuning functions.”

In prosecution, the patentee stated:

*The principal invention of the claims remaining in the present application -- i.e., the so-called “Browse” mode of operation -- permits a user to interactively scan through program listings in a time and/or channel domain while continuing to view the current program, thereby providing the user with substantially the same experience as channel surfing through actual television programs, with the exception that the user is instead surfing through schedule listings. The user can thus interactively navigate through the listing information at his leisure by issuing appropriate sequential time and/or channel control commands, while not missing any content of the program being simultaneously viewed.*

JX-0008 at 1029-30 (emphasis added). Figures 11, 12, and 12A depict “a television screen in a BROWSE mode of operation.” JX-0001 at 5:7-18. Additionally, the section of specification titled “Browse Mode” further describes Browse Mode. *See id.* at 11:21-13:14. The prosecution history, figures, and specification all indicate that “Browse Mode” lists information corresponding to a single program at one time.<sup>33</sup> The specification does not support a

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<sup>33</sup> The administrative law judge is not persuaded that the term “browse mode” was “generally understood,” in the manner that Rovi contends it was, at the time of the invention. *See* CX-0004C (Delp WS) at Q/A 63 (offering a conclusory opinion that the term was generally understood at the time of the invention). Rather, the prosecution history, figures, and specification provide the requisite context for understanding this term, and these sources all indicate that “Browse Mode” lists information corresponding to a single program at one time. No extrinsic evidence beyond Dr. Delp’s testimony is offered to support Rovi’s position.

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construction of browse mode that lists information for multiple program listings at one time, as Rovi urges.

(7) *To also selectively display reminder selection messages in at least one mode of operation*

The phrase “to also selectively display reminder selection messages in at least one mode of operation” appears only in the claims (*i.e.*, claims 5, 15, 17, 23, 25, 29, 34, and 41). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No construction is necessary. Alternatively, such that reminder messages may be presented in one or more configurations.	Comcast does not clearly present a construction in its post-hearing brief.  In its brief, Comcast argues: “In view of the intrinsic evidence, a POSITA would have understood that this recited ‘one mode’ of operation referred [ <i>sic</i> ] to Browse Mode, consistent with Comcast’s proposed construction, because it is the only ‘mode’ described in the ‘556 patent that satisfies the recitation of Claim 18(15).”

See Rovi Br. at 275; Resps. Br. at 308.<sup>34</sup>

Rovi’s entire argument for this term follows:

No construction is necessary of the claim phrase “reminder selection messages” in claim 18(15). Joint ID at 15. It is used in its plain and ordinary sense. The surrounding claim language makes clear that reminder selection messages may be presented in one or more configurations of the programming guide and allow users to select commands in response to the messages to select a reminder for a future program. With this surrounding language, which has a plain meaning to a person of ordinary skill in the art,

<sup>34</sup> In the Joint Identification of Disputed Claim Terms, Comcast proposed this construction: “display a notice asking whether the user wants to set a reminder for a future program while schedule information for that program covers a portion of a television video signal that is also being displayed.” See Joint Identification of Disputed Claim Terms, Ex. A at 15.

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no additional construction is needed. CX-0004C (Delp WS) at Q/A 66-67.

Comcast nevertheless argues that a broader phrase in claim 15—“selectively display reminder selection message in at least one mode of operation”—is limited to displaying a “reminder selection message” in a “browse” mode of operation in which only a single program in a single time slot is displayed. This argument tracks from its proposed construction of “one mode of operation” and the alleged disavowal of operation modes other than “browse.” Comcast further argues that the reminder selection message must be displayed in a separate overlay on top of the browse mode partial overlay—effectively requiring an overlay on an overlay. But claim 15’s plain language proves Comcast wrong: It only requires that the “reminder selection message be displayed in “overlaying relationship with another display signal being displayed . . . .” JX-0001 (‘556 Patent) at col. 28, lns. 40-43. This other display signal can, of course, include the television video signal. Thus, Comcast’s proposed construction should be rejected.

Rovi Br. at 275.

Comcast argues:

The parties also dispute whether the reminder selection messages and/or the reminder messages recited in Asserted Claim 18(15) must be displayed in Browse Mode. In view of the intrinsic evidence, a POSITA would have understood that this recited “one mode” of operation referred to Browse Mode, consistent with Comcast’s proposed construction, because it is the only “mode” described in the ‘556 patent that satisfies the recitation of Claim 18(15). RX-0848C at Q/A 70; *see* JX-0001 at 11:20-13:14. This was confirmed by Applicant defining the alleged invention of all pending claims as being directed to Browse Mode. *See* RDX-0926-39 (JX-0008); 1419 & 1466-67 (JX-0001). The below figures from the ‘556 patent (annotated), confirm that the reminder selection messages must appear in the Browse Mode of operation, and that the user remains in Browse Mode after setting a reminder:

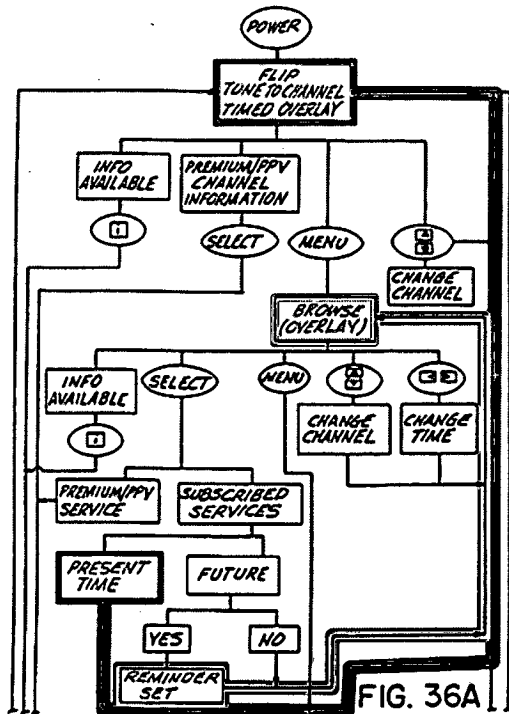


FIG. 36A

If while viewing program schedule information for a future time in BROWSE mode the user depresses the ENTER key on the remote controller, the microcontroller 16 will instruct the VDG 23 to display a REMINDER overlay message 130 which, as shown in FIG. 13, is displayed as a second overlay 131 appearing above the BROWSE overlay 132. The REMINDER message 130 queries the user as to

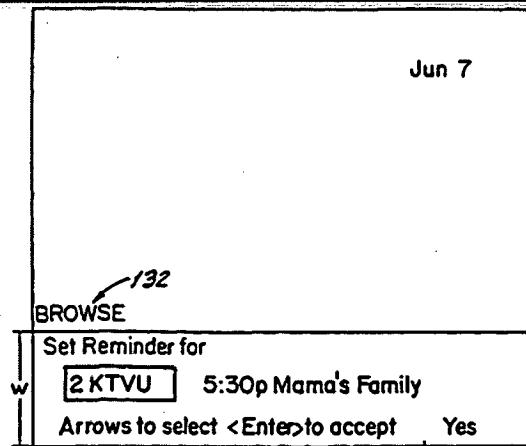


FIG. 13

Resps. Br. at 308-09.

The administrative law judge construes “to also selectively display reminder selection messages in at least one mode of operation” to mean “such that reminder selection messages may appear in at least one mode of operation.”

The relevant text from claim 15 follows:

said data processing means controlling said program schedule display generator *to also selectively display reminder selection messages in at least one mode of operation* of said programming guide, for allowing said user to choose selection commands in response to said reminder selection messages for selecting a reminder associated with a chosen future program, each said selected reminder message also to be displayed on said display at a predetermined time prior to the time of occurrence of each chosen future one of said television programs, said reminder message being displayed in overlaying relationship with another display signal being displayed at said time said reminder message is displayed.

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JX-0001 at 28:29-42 (emphasis added on disputed phrase). Thus, the construction comports with the surrounding claim language. *See Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007) (in rejecting a proposed construction that would render ancillary claim language superfluous, the Federal Circuit explained that “construing the word ‘vertical’ as referring to merely the orientation of the opening would render the phrases ‘along one of said side edges’ and ‘along one vertical corner of said structure’ superfluous, a methodology of claim construction that this court has denounced.”).

### (8) *Displaying / display*

The terms “displaying” and “display” appears throughout the claims and specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No construction is necessary for the claim terms “displaying” and “display.”	“using the electronic television program guide to visually overlay on a screen”

*See* Rovi Br. at 275-76; Resps. Br. at 312-13 (“... Thus, in view of the intrinsic and related evidence, a POSITA at the time of the ‘556 patent would have understood this term in context to refer to ‘using the electronic television program guide to visually overlay on a screen,’ not a computer monitor. *See* RX-0848C at Q/A 74-77.”).

Rovi’s entire argument for this term follows:

No construction is necessary for the claim terms “displaying” and “display.” Joint ID at 11. Both experts agree that the terms are well understood by those of ordinary skill in the art to mean a visual presentation such as what the user sees on a television screen. CX-0004C (Delp WS) at Q/A 50. Respondents argue that the terms should be construed to mean “using the electronic program guide to visually overlay on the screen,” but there is no basis for this proposed construction. *Id.* at Q/A 50-52. Nothing in the ‘556 Patent’s intrinsic record demands a narrowing construction. *Id.* Moreover, separate language in the asserted claims addresses the overlay relationship between the electronic

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program guide graphics and the broadcast signal for the television program.

Rovi Br. at 275-76.

Comcast argues:

Comcast's proposed construction is consistent with the construction of the similar "displaying" terms of U.S. Pat. No. 6,275,268 ("the '268 patent")—which shares a common specification with the '556 patent—issued by Judge Andrews in *United Video Properties v. Amazon.com*. RX-0834.0007; see RX-0848C (Grimes RWS) at Q/A 78. Judge Andrews explained that the shared specification never described the simultaneous display of program guide information without a partial overlay. *Id.*; see RX-0005C at Q/A 99 & 102-03. Thus, even the "simultaneous display" of Asserted Claim 40 is limited to the only such display that satisfies the recitation of the Asserted Claims—*i.e.*, a partial overlay. *Id.* Judge Andrews also recognized that the shared specification does not disclose any "display" with an overlay appearing on a device other than a TV, which similarly applies to the construction of the "display"/ "displaying" terms of the '556 patent. RX-0834; RX-0848C; RX-0005C at Q/A 74, 78-79.

The file history confirms that the Asserted Claims were only allowed because they were expressly limited to TV functionality to overcome prior art. *See id.* at 55; RDX-0934-39 & 1416-17 (JX-0008). The Applicant amended its claims to require "said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs" and user control commands including "television tuning commands" in response to the Examiner's statement that the pending claims were obvious. *Id.* Thus, in view of the intrinsic and related evidence, a POSITA at the time of the '556 patent would have understood this term in context to refer to "using the electronic television program guide to visually overlay on a screen," not a computer monitor. *See* RX-0848C at Q/A 74-77.

Resps. Br. at 312-13 (footnote omitted).

The administrative law judge has determined that it is not necessary to construe these terms apart from the phrases in which they appear. *Cf. Sulzer Textil A.G. v. Picanol N.V.*, 358 F.3d 1356, 1366 (Fed. Cir. 2004) ("The *Markman* decisions, in ruling that claim construction is a

matter of law for the court, do not hold that the trial judge in a patent case must repeat or restate every claim term in the court's jury instructions."); *see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).<sup>35</sup> Further, it is not necessary to construe the term because "display" alone is not central to the parties' infringement, validity, and domestic industry arguments; rather the parties dispute what "display" entails, which is delineated in terms and phrases construed above and below.

(9) *Program schedule display generator . . . for displaying . . .*

The parties brief this term in connection with the "video display generator . . . for displaying . . ." phrase above. *See* Joint Outline at 21-22.

Accordingly, the administrative law judge has determined it is not necessary to repeat the constructions here. *Cf. Sulzer Textil, O2 Micro, Biotec Biologische Naturverpackungen*, and *U.S. Surgical Corp.*

### 3. Representative Products

Rovi accuses two guide systems, the X1 and Legacy systems, of infringing the '556 Patent. Rovi Br. at 276. Rovi argues:

Each set-top box running the X1 Guide or Legacy Guide works in materially the same way for purposes of infringement. CX-0004C (Delp WS) at Q/A 118, 126; CX-1885 (Xfinity on X1 Platform) (including same instructions for the X1 Guide without regard to the set-top box model). [

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<sup>35</sup> *O2 Micro*, 521 F.3d at 1362, provides: "We, however, recognize that district courts are not (and should not be) required to construe every limitation present in a patent's asserted claims. *See, e.g., Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (deciding that disputed issue was the proper application of a claim term to an accused process rather the scope of the term); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (Claim construction 'is not an obligatory exercise in redundancy.'). Rather, '[c]laim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement.' *U.S. Surgical*, 103 F.3d at 1568."

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.] *Id.*; JX-0079C (Comcast/ARRIS Master Supply Agreement) at § 9.01(a); JX-0096C (Folk Dep. Tr.) 95-98; JX-0105C (McCann Dep. Tr.) 84-85. There are no differences between the X1 set-top boxes or X1 Guides running on X1 set-top boxes or Legacy set-top boxes or Legacy Guide running on Legacy set-top boxes relevant to infringement of the '556 Patent. CX-0004C (Delp WS) at Q/A 118-20, 125-26; JX-0105C (McCann Dep. Tr.) 87-88. Because there are no material differences between the different X1 set-top boxes, the ARRIS XG1 v3 (X1) AX013ANC is representative for all such products. CX-0004C (Delp WS) at Q/A 120. Because there are no material differences between the different Legacy set-top boxes, the Motorola DCX3501/M (aka "ARRIS-HD/DVR" or "MOTRNG200BNMR") is representative for all such products. *Id.* at Q/A 126.

*Id.* Thus, Rovi proposes that the ARRIS XG1 v3 (X1) AX013ANC is representative for the X1 system and the Motorola DCX3501/M is representative for the Legacy system.

Comcast argues that Rovi has not shown that other categories of the accused products contain the same accused components as the AX013ANC or DCX3501/M boxes. Resps. Br. at 292-93. The sole exhibit Comcast cites to support its argument, RX-0870, is an unsupported letter from Comcast's counsel that sorts model numbers into various groupings.

The administrative law judge has determined that Rovi has presented sufficient evidence, and that Comcast has not rebutted this evidence. *Spanston, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010) ("Appellants contend that the ALJ improperly shifted the burden to Appellants to establish that the non-modeled accused packages would behave differently than those that were modeled. Rather than improper burden shifting, the ALJ properly found that Appellants simply failed to rebut the substantial evidence set forth by Tessera."); *see also TiVo, Inc. v. EchoStar Commc'ns Corp.*, 516 F.3d 1290, 1308 (Fed. Cir. 2008). Accordingly, the administrative law judge finds that the ARRIS XG1 v3 (X1) AX013ANC is representative for the X1 system and the Motorola DCX3501/M is representative for the Legacy system.



**4. Literal Infringement**

Rovi asserts dependent claim 7, based on its dependency from independent claim 3, dependent claim 18, based on its dependency from independent claim 15, and independent claim 40. *See* Rovi Br. at 261 (Section VIII(B)). Rovi argues that respondents infringe the ‘556 Patent by importing, using, selling, leasing, and offering to sell the ‘556 Patent. *Id.* at 277. Comcast’s post-hearing brief contends that it does not infringe any of the asserted claims. *See* Resps. Br., Section XI(D).

**a) Claims 3 and 7**

Rovi acknowledges that “claim 7, as it depends from claim 3 (7(3)), is representative.” Rovi Br. at 261. Claim 3, with bracketed, alphanumeric claim limitations provided by Rovi, follows:

[3pre] 3. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising:

[3a] memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels;

[3b] user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto;

[3c] data processing means for receiving said signals in response to said user control commands; and

[3d] a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide;

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[3e] said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal,

[3f] each said portion comprising listing information for each successive one of said television programs scheduled to appear on said set of channels and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means,

[3g] said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlaid portion of said schedule information.

*See* JX-0001 ('556 Patent) at 24:13-52; Rovi Br. at 278-88 (providing the alphanumeric labels).

Claim 7, which Rovi treats as a single limitation, follows:

7. The electronic programming guide according to claims 1, 2, 3, 4, or 5 wherein said schedule information displayed by said video display generator comprises at least program title and program channel.

*See* JX-0001 ('556 Patent) at 26:8-12; Rovi Br. at 288-89.

Comcast presents the following chart, which provides a helpful summary of its arguments:

<b><u>Missing Limitations</u></b>	<b><u>Types of Deficiency</u></b>	<b><u>STBs</u></b>
Display generator	Not literally present	X1
	Not 112(6) equivalent	X1/Legacy
EPG located at the user site	Not literally present Not equivalent to cloud EPG under DoE	X1
Memory means for storing program schedule information	Not literally present	X1
Data processing means	Same means performing all recited functions not literally present; not equivalent under DoE	X1
	Not 112(6) equivalent	X1/Legacy
User control means	Not literally present	X1/Legacy

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<u><b>Missing Limitations</b></u>	<u><b>Types of Deficiency</b></u>	<u><b>STBs</b></u>
No partial overlay	Not present in full-screen guide or default configuration of Mini Guide	X1
No Browse Mode as properly construed	Not literally present Not DoE equivalent to Browse Mode	X1/Legacy
Reminder selection functionality of Claim 18(15) does not occur in Browse Mode	Not present literally or under DoE (X1) Failure of proof (Legacy)	X1/Legacy

See Resps. Br. at 318.

*(1) Limitation 3pre*

The text for this limitation is “3. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising[.]” See Rovi Br. at 278.

*(a) X1 System*

Rovi identifies the X1 Guide’s “On-Screen Guide or Mini Guide” in arguing that this limitation is satisfied. See Rovi Br. at 278 (“The X1 Guide’s On-Screen Guide or Mini Guide is designed to be used with a television system including a receiver capable of tuning to multiple channels.” (footnotes omitted)). Rovi also identifies [

] *Id.* at 279. Rovi

also presents a doctrine of equivalents argument in a single sentence:

An EPG that is distributed [

] performs substantially the same function—for example, providing a guide for browsing program schedule information while simultaneously watching a program—in substantially the same way—for example, it uses program schedule information to populate a guide displayed on the television and enables a user to issue a tuning command to view, record, set a reminder for, a program different from the one she is watching—to yield the same

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result—for example, it displays television guide information on a television simultaneously with a program being viewed and that is responsive to user commands.

*Id.* at 279-80 (essentially reproducing CX-0004C (Delp WS) at Q/A 135).

Comcast argues that the software implementing the X1 IPG is located on an [ ] not the set-top box. *See* Resps. Br. at 323.

Rovi's reply essentially represents its opening argument. *See* Rovi Reply at 112.

Comcast's reply argues that a "distributed IPG," such as the X1 IPG, is substantially different from a local IPG. *See* Resps. Reply at 124. Comcast also argues that Rovi's analysis is "both conclusory and incorrect." *Id.*

The administrative law judge has determined that the accused X1 set-top boxes do not contain an electronic programming guide that is "implemented by application software at a user site," as the construed claim requires.

Rather, the evidence shows that the X1 Guide is implemented on applications managed by an [ server.] *See* RX-0848C (Grimes) at Q/A 96, 108; RX-0340C.0008; RX-0329C; Tr. 1013 (Dr. Delp testified that the code he identified is "run on the server[.]"); RX-0840C (Allinson) at Q/A 10-33; RX-0841C (McCann) at Q/A 19-35. The evidence that Rovi cites does not demonstrate otherwise. Accordingly, Rovi has failed to meet its burden of showing that the accused X1 products satisfy this limitation.

Furthermore, Rovi has failed to meet its burden of showing that the accused X1 products satisfy this limitation under the doctrine of equivalents. As Comcast correctly notes, Rovi's single-sentence equivalents argument is wholly conclusory, because it simply recites the familiar function/way/result test without any particularized testimony or linking arguments. *See Medtronic Inc. v. Boston Sci. Corp.*, 558 F. App'x 998, 1000 (Fed. Cir. 2014) ("conclusory

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statements are insufficient to support a verdict finding infringement under the doctrine of equivalents”); *Cambrian Sci. Corp. v. Cox Commc’ns, Inc.*, 617 F. App’x 989, 994 (Fed. Cir. 2015) (“Cambrian’s factual support for its doctrine of equivalents claim is limited to two paragraphs from its expert report, both of which are conclusory. . . . The paragraphs are devoid of any particularized testimony or linking arguments.”); *PACTIV Corp. v. S.C. Johnson & Son, Inc.*, 26 F. App’x 943, 948 n.5 (Fed. Cir. 2002) (“The testimony of Pactiv’s expert Dr. James Conley, which simply recites the familiar function/way/result test and concludes that the Slide-Loc bag infringes the ‘143 patent by the doctrine of equivalents, without further analysis or explanation, is insufficient to defeat summary judgment.”).

### (b) *Legacy System*

Rovi argues that the Legacy set-top boxes satisfy this limitation. *See* Rovi Br. at 292. Comcast does not present any argument on this limitation. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused Legacy products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 221 (the Motorola DCX3501M, is “loaded with Xfinity Guide software called ‘Xfinity Guide System’, which includes an electronic program guide for displaying television programs and program schedule information for a plurality of television channels. . . .”).

### (2) *Limitation 3a*

The text for this limitation is “memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels[.]” *See* Rovi Br. at 280.

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(a) *X1 System*

Rovi argues that the accused X1 products contain dynamic random access memory (DRAM) that satisfies this limitation. *See* Rovi Br. at 280.

Comcast argues that the memory in the X1 products “does not store program schedule information as recited by the various limitations of the Asserted Claims.” Resps. Br. 324.

The administrative law judge construed “memory means,” in accordance with § 112 ¶ 6, to require that the memory store program information on ROM (17), DRAM (18) and non-volatile memory EEPROM (20). *See* Section IV(A)(2)(c)(2).

The ‘556 Patent explains that “the microcontroller 16 takes the program schedule information stored in the DRAM 18 and . . . supplies it to a video display generator (VDG) 23, which . . . includes a standard RGB video generator 24, which takes the digital program schedule information sent by the microcontroller 16 and converts it into an RGB format in accordance with the bit map for the particular screen display then being presented to the user on the television receiver 27.” JX-0001 at 8:4-17. The patent does not describe a distributed set-top box system such as the X1 system.

The evidence shows that Comcast stores program information on an [ ] not on the set-top box’s DRAM. *See* RX-0848C (Grimes WS) at Q/A 109-15; RX-0841C (McCann) at Q/A 19-35, 48. Further, inasmuch as this limitation is a means-plus-function limitation, this aspect of the claim is limited to the corresponding localized structures described in the specification. *See* 35 U.S.C. § 112; *MobileMedia Ideas*.<sup>36</sup>

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<sup>36</sup> *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1170 (Fed. Cir. 2015) (“Literal infringement of a § 112 ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.”).

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Accordingly, the administrative law judge has determined that the accused X1 products do not satisfy this limitation.

### *(b) Legacy System*

Rovi argues that the Legacy set-top boxes satisfy this limitation. *See* Rovi Br. at 292. Comcast does not present any argument on this limitation. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused Legacy products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 226-27; JX-01 12C (Radloff Dep.) at 142:14-22; CX-1288 (Advanced Media Technologies DCX3501-M HD Dual Tuner DVR Set-Top Datasheet).

### *(3) Limitation 3b*

The text for this limitation is “user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto[.]” *See* Rovi Br. at 280.

### *(a) X1 System*

Rovi’s entire argument for this limitation is:

The X1 ‘556 Patent Accused Products are packaged and shipped with a remote controller that may be used for television tuning and guide control including the transmission of signals related to such functions. CX-0004C (Delp WS) at Q/A 145; JX-0104C (Martin Dep. Tr.) 26-27; CX-1255 (XR2 and XR5 Remote Control Buttons and Functions Support); *see also* JX-0113C (Robinson Dep. Tr.) 192-93; CX-1305C.

Rovi Br. at 280.

Comcast’s entire argument is:

As Dr. Delp testified in his witness statements, and confirmed at trial, he only relied upon a remote control used in conjunction with the STB to establish the existence of this element. Tr. 1017:1-17. Because this element exists outside the Accused Products, Rovi

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cannot establish literal infringement, and having failed to offer any doctrine of equivalents for this element, Rovi cannot establish that the Accused Products directly infringe. *See id.*

Resps. Br. at 329.

The parties agreed that the “user control means” was a means-plus-function limitation where the function included “choosing user control commands” and “transmitting signals in response thereto” and the structures included a “remote control(ler), remote control(ler) receiver, infrared (IR) receiver, or keypad.” *See* Section IV(A)(2)(b).

The evidence of record shows that the accused X1 products are bundled with a remote control. *See* CX-0004C (Delp WS) at Q/A 145; JX-0104C (Martin Dep. Tr.) 26-27; CX-1255 (XR2 and XR5 Remote Control Buttons and Functions Support); *see also* JX-0113C (Robinson Dep. Tr.) 192-93; CX-1305C (discussing “IR and RF4CE remote support” and “Remote Control Protocols Supported”).

Furthermore, Comcast did not raise this argument in its pre-hearing brief. *See generally* Comcast Pre-Hr’g Br. at 774-800 (the argument is not presented); *see also id.* at 808 (arguing that ARRIS and Technicolor do not indirectly infringe the ‘556 Patent because neither “imports the user control means identified by Dr. Delp (*i.e.*, remote controls)). Accordingly, Comcast has waived this argument.

Thus, the administrative law judge finds that the accused X1 products satisfy this limitation.

### (b) Legacy System

Rovi’s entire argument is:

The Legacy Patent Accused Products are packaged and shipped with a remote controller that may be used for television tuning and guide control including the transmission of signals related to such functions. CX-0004C (Delp WS) at Q/A 228; CX-1205 (Xfinity



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User Guide) at 5; CX-1288 (DCX3501-M HD Dual Tuner DVR Set-Top Datasheet) at 2.

Rovi Br. at 292.

Comcast does not present separate argument for the accused Legacy products. *See* Resps. Br. at 318, 329.

The administrative law judge finds that the accused Legacy products satisfy this limitation for the same reasons the accused X1 products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 228; CX-1205 (Xfinity User Guide) at 5; CX-1288 (DCX3501-M HD Dual Tuner DVR Set-Top Datasheet) at 2.

### (4) *Limitation 3c*

The text for this limitation is “data processing means for receiving said signals in response to said user control commands[.]” *See* Rovi Br. at 281.

### (a) *X1 System*

Rovi argues that each X1 accused product “includes a System on a Chip (“SoC”) (which contains one or more processors called CPUs for running code installed within non-volatile flash memory) such as a [ ] connected to the device’s IR receiver which receives signals from the remote controller.” Rovi Br. at 281. Rovi then adds an unsupported, single-sentence doctrine of equivalents argument:

Even if the SoC were deemed “after-arising technology,” the Accused Products could still satisfy this limitation under the doctrine of equivalents. *See Ring & Pinion Serv. Inc. v. ARB Corp. Ltd.*, 743 F.3d 831, 835 (Fed. Cir. 2014) (“Equivalence under the doctrine of equivalents . . . is evaluated at the time of infringement. Hence, an after-arising technology, a technology that did not exist at the time of patenting, can be found to be an equivalent under the doctrine of equivalents . . .”).

*Id.*

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Comcast argues that the ARRIS XG1v3 set-top box's [ ] system on chip ("SoC") "is after-arising technology that cannot literally infringe" and that the [ ] does not perform all of the recited functions attributed to the singular data processing means in each Asserted Claim." *See* Resps. Br. at 325. Comcast then argues that Rovi's doctrine of equivalents argument fails, *inter alia*, because Dr. Delp did not identify structure that can "perform all of the required functions" of the claim. *Id.* at 327.

In *Ring & Pinion*, the Federal Circuit explained that for a § 112 infringement analysis, there are two differences between literal infringement and infringement under the doctrine of equivalents:

Equivalence under section 112(f) is evaluated at the time of issuance. . . . Equivalence under the doctrine of equivalents, in contrast, is evaluated at the time of infringement. *Id.* Hence, an after-arising technology, a technology that did not exist at the time of patenting, can be found to be an equivalent under the doctrine of equivalents even though it cannot be an equivalent under the literal infringement analysis of § 112(f). *Id.*

The second difference between literal infringement and doctrine of equivalents infringement under § 112(f) relates to the function of the element. For literal infringement, the accused structures must perform the function recited in the claim (identical function). The doctrine of equivalents covers accused structures that perform substantially the same function in substantially the same way with substantially the same results. The doctrine of equivalents thus covers structures with equivalent, but not identical, functions. This is true whether the accused equivalent was known at the time of patenting or later arising.

*Ring & Pinion Serv. Inc. v. ARB Corp.*, 743 F.3d 831, 835 (Fed. Cir. 2014) (citing *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*, 145 F.3d 1303 (Fed. Cir. 1998)).

The administrative law judge has determined that Rovi has not shown that the accused X1 products literally meet this limitation (3c). As an initial matter, Dr. Delp did not sufficiently address whether the [ ] was equivalent to the microcontroller (16) (such as the

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M68000EC) that the ‘556 Patent discloses. *See generally* CX-0004C (Delp WS) (Dr. Delp discusses a generic “Soc” but does not address the [ ] or the M68000EC). Indeed, Dr. Delp’s testimony suggests that any chip containing “one or more processors” would meet this limitation. *See id.* at Q/A 147-48 (the remainder of Dr. Delp’s testimony about the IR receiver and RF4CE interface is not directly pertinent to the [ ] microcontroller analysis; that portion of the testimony shows that the X1 boxes can receive commands from a remote control). Comcast’s expert, on the other hand, testified that “there is nothing within the X1 Accused Products that performs” the function of taking program schedule information from DRAM and supplying it to a video display generator. *See* RX-0848C (Grimes) at Q/A 118-20. Dr. Grimes also testified that the Broadcom [ ] SoC is later-arising technology. *See* RX-0848C (Grimes) at Q/A 119; RX-0365 (the 2012 Broadcom press release indicates that the [ ] features enhanced security, expands video capacity and 3D graphics performance, performs “quad transcoding” that reduces the need for expensive external peripheral hardware, and adds power-management capabilities for new energy-efficiency requirements). Accordingly, the administrative law judge has determined that Rovi has not shown that the [ ], which Broadcom introduced in 2012, is equivalent to the microcontroller disclosed in the ‘556 Patent, which issued in July 2002. *See Ring & Pinion*, 743 F.3d at 835 (“Equivalence under section 112(f) is evaluated at the time of issuance”).

Additionally, the administrative law judge has determined that Rovi has not shown that the accused X1 products (the [ ]) meet this limitation under the doctrine of equivalents. Rovi has not identified sufficient evidence to show that the [ ] performs substantially the same function as the microcontroller (such as the M68000EC) disclosed in the ‘556 Patent, in substantially the same way as that microcontroller, with substantially the same results. *See Ring*

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& *Pinion*, 743 F.3d at 835. Indeed, Rovi's expert does not testify to any doctrine of equivalents issues with relation to the X1 products and this limitation (3c). *See generally* CX-0004C (Delp WS) at Q/A 147-49; *see also DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1017 (Fed. Cir. 2006) (the "all elements rule" requires that a doctrine of equivalents analysis must "be assessed on a limitation-by-limitation basis, rather than from the perspective of the invention as a whole") (emphasis added)).

### (b) *Legacy System*

Rovi's entire argument is:

The Legacy Accused Products include a data processor, microcontroller, or microprocessor or their equivalents, for receiving signals in response to user control commands. CX-0004C (Delp WS) at Q/A 229. Each Legacy '556 Patent Accused Product includes a System on a Chip ("SoC") as discussed above connected to the device's IR receiver which receives signals from the remote controller. *Id.*; JX-0098C (Gee Dep. Tr.) 18-19; JX-0112C (Radloff Dep. Tr.) 124, 126-27. Comcast argues that Dr. Delp failed to identify the specific SoC used in the relevant set-top boxes. RX-0848C (Grimes RWS) at Q/A 167. This argument is of no relevance. There is no dispute that the accused set-top boxes in general and Motorola DCX3501M in particular include a SoC (including a processor) that functions in the manner described by Dr. Delp. CX-0004C (Delp WS) at Q/A 229. Dr. Delp also testified that this SoC operates the same way and includes the same features as they relate to the asserted claims of the '556 Patent. Comcast provides no information on how any particular processor differs as they related to the claims at issue. RX-0848C (Grimes RWS) at Q/A 167-69.

Rovi Br. at 292-93. Dr. Delp's entire testimony on this limitation is:

**Q229. Let's look at 3c: It recites a "data processing means for receiving said signals in response to said user control commands;" In your opinion, do the Legacy guide boxes satisfy this limitation?**

A. The processing on the Motorola DCX3501M is implemented using a system-on-chip, or SoC, *which contains one or more*

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**processors** for running code installed within non-volatile flash memory. *See, e.g.*, JX-0098C (Gee Tr.) at 18:21-19:8; JX-0112C (Radloff Tr.) at 124:14-22, 126:10-127:3. As explained before, the SoC is a processor and is connected to a front panel, which contains an IR receiver. The IR receiver receives user commands, for example, sent from a remote controller, and transmits them to the processor, which, in turn “receives” the user commands. Thus, the Motorola DCX3501M meets the structural limitation of this claim term because it includes a processor and it is configured to perform the infringing function of receiving signals in response to user control commands.

CX-0004C (Delp WS) at Q/A 229 (emphasis added).

The administrative law judge has determined that Rovi has not met its burden of showing that the “one or more processors” Dr. Delp identified is equivalent to the microcontroller disclosed in the specification, because identifying “one or more processors” does not identify the processor that corresponds to the claimed processor. *See* 35 U.S.C. § 112; *MobileMedia Ideas*<sup>37</sup>; RX-0848C (Grimes) at Q/A 169. Accordingly, the administrative law judge has determined that the accused Legacy products do not satisfy this limitation.

### (5) *Limitation 3d*

The text for this limitation is “a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide[.]” *See* Rovi Br. at 283.

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<sup>37</sup> *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1170 (Fed. Cir. 2015) (“Literal infringement of a § 112 ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.”).

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(a) *X1 System*

Rovi argues:

The SoC of the X1 ‘556 Patent Accused Products includes a graphics processing unit (“GPU”) that is responsible for rendering the images displayed on the television screen. . . . A GPU embedded on a SoC is the equivalent of, interchangeable with, and performs the same function as, a video graphic card.

Rovi Br. at 283 (citations omitted); *see also* CX-0004C (Delp WS) at Q/A 150-53. In conclusion, Rovi presents a single-sentence doctrine of equivalents argument:

If “browse mode” is further limited to require only the display of a single program in a single time slot, the Mini-Guide and On-Screen Guide would infringe under the doctrine of equivalents. CX-0004C (Delp WS) at Q/A 138. An electronic program guide that displays more than one program listing at a time performs substantially the same function—for example, it provides a user program schedule information while simultaneously viewing a program—in substantially the same way—for example, using program schedule information to populate a guide displayed on a television simultaneously with programming—to yield the same result—for example, allowing a user to continue watching a program while “surfing” through other channel or time domains. *Id.*

Rovi Br. at 285.

Comcast argues that the [ ] SoC does not infringe because it is later-arising technology, because Rovi did not identify “the two substructures of the video display generator,” and because Rovi did not “establish that the GPU in the [ ] . . . performs any of the display generator element’s recited functions.” Resps. Br. at 319-20.<sup>38</sup>

The administrative law judge has determined that Rovi has not shown that the accused X1 products meet this limitation (3d) literally or under the doctrine of equivalents.

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<sup>38</sup> Comcast’s “Browse Mode” arguments are addressed in relation to limitation 3f.

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To begin, the Broadcom [ ] SoC (that Dr. Delp identifies as satisfying this limitation) is later-arising technology. *See* RX-0848C (Grimes) at Q/A 118-21 (amongst other things, Dr. Grimes also explains that the SoC contains a graphics component that differs from the VGA-type graphics card); RX-0365. The administrative law judge previously determined that Rovi has not shown that the [ ] which Broadcom introduced in 2012, is equivalent to the microcontroller disclosed in the ‘556 Patent, which issued in July 2002. *See Ring & Pinion*, 743 F.3d at 835 (“Equivalence under section 112(f) is evaluated at the time of issuance”). In relation to limitation 3d, Rovi has not shown that GPU embedded on a SoC (*circa* 2012) is equivalent to the graphics card described in the specification.

Dr. Delp opines that “a person or ordinary skill in the art would consider a GPU embedded on a SoC to be interchangeable with a discrete video graphics card.” CX-0004C (Delp WS) at Q/A 151. Dr. Delp also presents an incomplete doctrine of equivalents analysis: “[i]n fact, a GPU performs the same function as a graphics card—it accelerates the creation of images—in substantially the same way—it offloads the image rendering process from the CPU.” *Id.* This testimony does not demonstrate, or sufficiently explain, that the GPU embedded on a SoC is identical or equivalent to the corresponding structures in the specification—a VGA-type graphics card (such as a Rocgen card manufactured by Roctec) and a “Video Overlay Device.” *See MobileMedia Ideas*.<sup>39</sup>

In contrast, Dr. Grimes testified that a generic video graphics card “would not have been able to accept a NTSC input, mix a NTSC input with an RGB video input, or generate a composite NTSC output.” RX-0005C (Grimes WS) at Q/A 37-38; *see also* Tr. 1104-1105.

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<sup>39</sup> *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1170 (Fed. Cir. 2015) (“Literal infringement of a § 112 ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.”).

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Further, Dr. Grimes opined that the Roctec VGA card mentioned in the specification “did not exist.” RX-0005C (Grimes WS) at Q/A 38; *see also* RX-0317 (this is a peripheral device, not a graphics card). Rovi has not presented or cited evidence that the Roctec VGA card actually exists, and its comparisons to the card are thus deficient. Accordingly, Rovi has not met its burden of showing that the accused X1 products literally meet this limitation (3d).

The administrative law judge has also determined that Rovi has failed to meet its burden of showing that the accused X1 products meet this limitation (3d) under the doctrine of equivalents. The testimony that Rovi cites, CX-0004C (Delp WS) at Q/A 138, is addressed to the preamble. Further, the testimony that pertains to this limitation is deficient because it does not address the “result” of the function/way/result test. *Id.* at Q/A 151 (“In fact, a GPU performs the same function as a graphics card—it accelerates the creation of images—in substantially the same way—it offloads the image rendering process from the CPU.”); *see also id.* at Q/A 223 (for the Legacy products, Dr. Delp addresses all parts of the function/way/result test). Additionally, Rovi’s argument is too conclusory to support a finding of infringement under the doctrine of equivalents. *See Medtronic*, 558 F. App’x at 1000; *Cambrian*, 617 F. App’x at 994; *PACTIV Corp.*, 26 F. App’x at 948 n.5.

### (b) Legacy System

Rovi argues:

The Legacy Accused Products include a video graphics card or its equivalent that receives video control commands from the relevant SoC and program schedule information from memory for displaying interactively-selected successive portions of said schedule information for a currently tuned channel in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide. CX-0004C (Delp WS) at Q/A 230. The SoC of the Legacy ‘556 Patent Accused Products includes a graphics processing unit (“GPU”) that is responsible for rendering the



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images displayed on the television screen. *Id.*; CX-1370C (RNG-200 Hardware, Case & Packaging Specification) at 24, 41-47. A GPU embedded on a SoC is the equivalent of a video graphic card. CX-0004C (Delp WS) at Q/A 230; JX-0086C (Allinson Dep. Tr.) 87 (referring to the GPU as a “graphics chip”).

Rovi Br. at 293-94. In conclusion, Rovi presents a single-sentence doctrine of equivalents argument:

If “browse mode” is further limited to require only the display of a single program in a single time slot, the Mini-Guide would infringe under the doctrine of equivalents. CX-0004C (Delp WS) at Q/A 223. An electronic program guide that displays more than one program listing at a time performs substantially the same function—for example, it provides a user program schedule information while simultaneously viewing a program—in substantially the same way—for example, using program schedule information to populate a guide displayed on a television simultaneously with programming—to yield the same result—for example, allowing a user to continue watching a program while “surfing” through other channel or time domains. *Id.*

Rovi Br. at 294. The analysis is identical to that which Rovi presented for the X1 products.

*Compare id.* at 285 with *id.* at 294.<sup>40</sup>

Comcast argues that “Rovi’s identification of an unspecified SoC within the DCX3501M STB for the recited display generator amounts to a total failure of proof.” Resps. Br. at 322.

In reply, Rovi points out that Comcast has marked its products with the ‘556 Patent. *See* Rovi Reply at 114; CX-0004C (Delp WS) at Q/A 127; CX-1676 (Screenshot of Legacy Product marked with the ‘556 Patent). Apart from this, Rovi does not address the Legacy products separately in its reply. *See* Rovi Reply at 111-14.

The administrative law judge has determined that Rovi has not shown that the accused Legacy products satisfy this limitation literally or under the doctrine of equivalents.

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<sup>40</sup> Comcast contends that Rovi waived this argument because Rovi did not present it in its pre-hearing brief. *See* Resps. Reply at 120 n.53.

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Dr. Delp did not identify the allegedly infringing component (*e.g.*, by name, model number, etc.) in the accused Legacy products with sufficient particularity. *See* RX-0848C (Grimes RWS) at Q/A 168-69; *see also* CX-0004C (Delp WS) at Q/A 260-61 (identifying the Broadcom [ ] SoC within a proposed DI product). Dr. Grimes, on the other hand, testified that a SoC is later-arising technology that was not an equivalent component. *See* RX-0848C (Grimes RWS) at Q/A 168.

Rovi's doctrine of equivalents argument does not identify a structure and function that tracks the claim language. For example, claim 3 requires the video display generator to "displaying interactively-selected successive portions of said schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide," while Dr. Delp opines that an "*electronic program guide* that displays *more than one program listing at a time* performs substantially the same function—it provides a user program schedule information while simultaneously viewing a program" meets this limitation. *See* CX-0004C (Delp WS) at Q/A 223 (emphasis added). Additionally, Rovi's argument is far too conclusory to support a finding of infringement under the doctrine of equivalents. *See Medtronic*, 558 F. App'x at 1000; *Cambrian*, 617 F. App'x at 994; *PACTIV Corp.*, 26 F. App'x at 948 n.5.

Accordingly, Rovi has failed to show that the accused Legacy products meet this limitation literally or equivalently.

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*(6) Limitation 3e*

The text for this limitation is “said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal[.]” *See* Rovi Br. at 285.

*(a) X1 System*

Rovi argues that the “GPU on the SoC” and “the On-Screen Guide and/or Mini Guide” satisfies this limitation. Rovi Br. at 285-86.

Comcast argues that “the X1 IPG does not provide any screen displaying program schedule information with in a partial overlay by default.” *Resps. Br.* at 330.

Comcast then argues that the X1 Mini Guide differs from a partial overlay because it is a “shrunk video signal displayed along with the listing information in a non-overlaying relationship.” In reply, Comcast adds, “[t]he X1 Full Screen Grid is a total overlay of the TV signal comprising opaque and translucent (but no transparent) pixels, and the X1 Mini Guide does not display any overlay whatsoever by default, an option that is changed by only [ ] of X1 users.” *Reply* at 126.

The administrative law judge has determined that the accused X1 products meet this limitation. The evidence indicates that the X1’s Mini Guide can display program schedule information in a partial overlaying relationship with a currently showing program. *See* CX-0004C (Delp WS) at Q/A 169; CX-1640 at 4-9. Rovi, however, has not shown that the On-Screen Guide (the full-size guide) meets this limitation, as that guide does not generate a partial overlay. *See* RX-0848C (Grimes RWS) at Q/A 131.

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### *(b) Legacy System*

Rovi argues that the “Motorola DCX3501M’s SoC (utilizing the GPU[]) is configured to generate opaque and translucent graphics overlay between a layer of currently appearing display signal, such as a T.V. show, and a layer of program schedule information, such as the Mini Guide.” CX-0004C (Delp WS) at Q/A 231 (citing CX-1371C (Comcast RNG-200 Platform Software Requirements Specification) at 45); Rovi Br. at 294.

Comcast does not present separate argument for the accused Legacy products. *See* Resps. Br. at 318, 330-31.

The administrative law judge finds that the accused Legacy products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 231; CX-1371C.

### *(7) Limitation 3f*

The text for this limitation is “each said portion comprising listing information for each successive one of said television programs scheduled to appear on said set of channels and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means[.]” *See* Rovi Br. at 286.

### *(a) X1 System*

Rovi argues that the “On-Screen Guide and Mini Guide of the X1 ‘556 Patent Accused Products are configured to respond to guide control commands by responsively displaying the appropriate listing information.” Rovi Br. at 286.

Comcast argues that the “accused X1 Mini Guide, which shows multiple program listings at a time, does not provide a display of a single program listing that differs from the currently-

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viewed television program in time and/or channel and thus does not satisfy Browse Mode” and that “the X1 full-screen guide is not Browse Mode because it covers the entire screen (and thus is not a partial overlay) and shows multiple program listings over multiple channels and timeslots (and thus fails to provide only a single program listing).” Resps. Br. at 331-32.

The administrative law judge previously determined that the prosecution history, figures, and specification all indicate that “Browse Mode” lists information corresponding to a single program at one time. *See* Section IV(A)(2)(c)(6). The evidence that Rovi relies upon, CX-0004C (Delp WS) at Q/A 162, 169; CX-1640 (X1 Screenshots for the ‘556 Patent), shows guides with listing information for multiple programs or channels. *See* RX-0848C (Grimes RWS) at Q/A 136-40. Accordingly, the administrative law judge has determined that the accused X1 products do not meet this limitation.

### *(b) Legacy System*

Rovi argues that the Legacy products’ Mini Guide satisfies this limitation. Rovi Br. at 295. As with the X1 products, the evidence that Rovi relies upon, CX-0004C (Delp WS) at Q/A 233; CX-1601 (Legacy Screenshots for the ‘556 Patent), shows guides with listing information for multiple programs or channels. *See* RX-0848C (Grimes RWS) at Q/A 159-63. Accordingly, the administrative law judge has determined that the accused Legacy products do not meet this limitation.

### *(8) Limitation 3g*

The text for this limitation is “said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlaid portion of said schedule information.” *See* Rovi Br. at 288.

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### *(a) X1 System*

Rovi argues that the “X1 ‘556 Patent Accused Products allow a user to select a program from the On-Screen Guide or Mini Guide, different from the one being watched.” Rovi Br. at 288. Comcast does not present an argument for the accused X1 products. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused X1 products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 165, 169; CX-1169C (Xcalibur Mini Guide Flow, Templates and Interaction) at 2-4; CX-1640 (X1 Screenshots for the ‘556 Patent) at 2-3, 4-9.

### *(b) Legacy System*

Rovi argues that the “Legacy Accused Products allow a user to select a program from the Mini Guide, different from the one being watched.” Rovi Br. at 295. Comcast does not present an argument for the accused Legacy products. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused Legacy products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 234; CX-1601 (Legacy Guide Screenshots for the ‘556 Patent).

### *(9) Claim 7*

The text for claim 7 is: “7. The electronic programming guide according to claims 1, 2, 3, 4, or 5 wherein said schedule information displayed by said video display generator comprises at least program title and program channel.” *See* JX-0001 (‘556 Patent) at 26:8-12; Rovi Br. at 288-89.

### *(a) X1 System*

Rovi argues that the “X1 ‘556 Patent Accused Products satisfy claim 7 because each is configured such that the displayed scheduled information include at a program title and program

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channel.” Rovi Br. at 288. Comcast does not present an argument for the accused X1 products. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused X1 products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 167, 169; CX-1640 (X1 Screenshots for the ‘556 Patent) at 2 (On-Screen Guide), 4 (Mini Guide). CX-0004C (Delp WS) at Q/A 169. The guides shown in CX-1640 include program listings that comprise program title and channel information. *Id.* However, claim 7 is not infringed because claim 3 is not infringed. *See Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) (“Because we hold that the asserted independent claims of Ferring’s patents are not infringed, the asserted dependent claims are likewise not infringed.”)).

### *(b) Legacy System*

Rovi argues that the “Legacy Accused Products satisfy claim 7 because each is configured such that the displayed scheduled information includes a program title and program channel.” Rovi Br. at 295. Comcast does not present an argument for the accused Legacy products. *See* Resps. Br. at 318.

The evidence shows that the accused Legacy products display schedule information that includes a program title and program channel. *See* CX-0004C (Delp WS) at Q/A 235; CX-1601 (Legacy Guide Screenshots for the ‘556 Patent). The guides shown in CX-1601 include program listings that comprise program title and channel information. *Id.*

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Accordingly, the administrative law judge has determined that the accused Legacy products satisfy this limitation. However, claim 7 is not infringed because claim 3 is not infringed. *See Ferring*, 764 F.3d at 1411.<sup>41</sup>

### *b) Claims 15 and 18*

Claim 15 follows:

15. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising:

memory means for storing television program schedule information;

user control means for choosing user control commands, including selection commands, guide channel-control and guide time-control commands, and transmitting signals in response thereto;

data processing means for receiving said signals in response to said user control commands; and

a program schedule display generator coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means;

said data processing means controlling said program schedule display generator to also selectively display reminder selection messages in at least one mode of operation of said programming guide, for allowing said user to choose selection commands in response to said reminder selection messages for selecting a

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<sup>41</sup> In *Ferring*, the Federal Circuit found a dependent claim not infringed because its corresponding independent claim was not infringed. *Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) (“Because we hold that the asserted independent claims of Ferring’s patents are not infringed, the asserted dependent claims are likewise not infringed.”)).



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reminder associated with a chosen future program, each said selected reminder message also to be displayed on said display at a predetermined time prior to the time of occurrence of each chosen future one of said television programs, said reminder message being displayed in overlaying relationship with another display signal being displayed at said time said reminder message is displayed.

JX-0001 at 28:4-42.

Claim 18 follows:

18. The television schedule system according to claims 14, 15, 16, or 17 wherein the navigation is controlled by user-activated direction keys provided on said user control means.

*Id.* at 29:49-52.

(1) *Claim 15*

(a) *X1 System*

For claim 15, Rovi explains:

Claim 15 includes the same limitations as claim 3, but adds “reminder message” limitations: “said data processing means controlling said program schedule display generator to also selectively display ***reminder selection messages*** in at least one mode of operation of said programming guide, for allowing said user to choose selection commands in response to ***said reminder selection messages*** for selecting a reminder associated with a chosen future program, ***each said selected reminder message*** also to be displayed on said display at a predetermined time prior to the time of occurrence of each chosen future one of said television programs, ***said reminder message*** being displayed in overlaying relationship with another display signal being displayed at said time ***said reminder message*** is displayed.” JX-0001 (‘556 Patent) at col. 28, lns. 29-42 (emphasis added); CX-0004C (Delp WS) at Q/A 170.

Rovi Br. at 289 (bolding added, italics in original). Rovi then argues:

Claim 15 is satisfied for the same reasons as claim 3. *Id.* With regard to the “reminder message” limitations, the X1 ‘556 Patent Accused Products display reminder selection messages in the On-Screen Guide and Mini Guide. CX-0004C (Delp WS) at Q/A 171;

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*id.* at Q/A 169 (explaining the reminder selection messages in CX-1640 (X1 Screenshots for the '556 Patent) at 46-50 (On-Screen Guide), 54-60 (Mini Guide). Once a reminder is set it will be displayed at a predetermined time prior to the occurrence of the chosen program and the reminder message will be displayed in an overlaying relationship with the television program signal being displayed. CX-0004C (Delp WS) at Q/A 171. Comcast argues that reminder selection messages must occur in "browse mode." RX-0848C (Grimes RWS) at Q/A 143-44. Comcast is incorrect, but in any event, Dr. Delp provided evidence that the claimed reminder selection messages occur in "browse mode." CX-0004C (Delp WS) at Q/A 169; CX-1640 (X1 Screenshots for the '556 Patent) at 46-50, 55-57, 59-60; CDX-0607 (Delp WS Demonstrative) at 9-19.

*Id.* at 289-90 (footnote omitted).

Comcast argues that claim 15's "reminder functionality . . . must also occur in Browse Mode" and that the accused products cannot infringe because "the reminder selection message functionality does not occur in Browse Mode." Resps. Br. at 334-35. Comcast also argues that Rovi's expert "failed to identify any 'reminder selection message' . . . as Claim 15 requires." *Id.* at 334.

The administrative law judge has determined that the accused X1 products satisfy this limitation. The X1's On-Screen (full size) and Mini Guides can display reminder messages in browse mode. *See* CX-1640 at 46-50, 55-57, 59-60; CX-0004C (Delp WS) at Q/A 169. The messages are partially overlaid over a current program. *Id.* CX-1640 at 50, 60.

Although the administrative law judge has found that the accused X1 products satisfy this limitation, the accused X1 products still do not infringe claim 15 because Rovi has not shown that claim 7(3) is infringed.

### (b) Legacy System

Rovi argues:

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The Legacy Accused Products display reminder selection messages in the Mini Guide. CX-0004C (Delp WS) at Q/A 237 (discussing CX-1601 (Legacy Guide Screenshots for the ‘556 Patent) at 15-18). Once a reminder is set it will be displayed at a predetermined time prior to the occurrence of the chosen program and the reminder message will be displayed in an overlaying relationship with the television program signal being displayed. CX-0004C (Delp WS) at Q/A 237 (discussing CX-1601 (Legacy Guide Screenshots for the ‘556 Patent) at 15-18). Even if the reminder selection messages must occur in “browse mode” (they do not), Dr. Delp provided evidence that the claimed reminder selection messages occur in “browse mode.”

Rovi Br. at 296 (footnote omitted).

Comcast argues that Rovi has “have not established that the reminder *selection* messages occur as a second overlay ‘appearing above the BROWSE overlay’ or any other overlay.”

Resps. Br. at 335 (emphasis added by Comcast).

The administrative law judge has determined that the accused Legacy products satisfy this limitation. The Legacy Guide can display reminder messages in browse mode. *See* CX-0004C (Delp WS) at Q/A 237; CX-1601 (Legacy Guide Screenshots for the ‘556 Patent) at 15-18. The messages are partially overlaid over a current program. *Id.* CX-1640 at 15-18.

Although the administrative law judge has found that the accused Legacy products satisfy this limitation, the accused Legacy products still do not infringe claim 15 because Rovi has not shown that claim 7(3) is infringed.

### (2) *Claim 18*

#### (a) *X1 System*

For claim 18, Rovi’s entire argument is:

This claim limitation is satisfied by the X1 ‘556 Patent Accused Products’ infringement of claim 15 coupled with the capability of navigation controlled by user-activated direction keys provided on the remote controller. CX-0004C (Delp WS) at Q/A 173; CX-1214 (Learn to Navigate Your X1 Guide).

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*Id.* at 290-91. Comcast does not present an argument for the accused X1 products. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused X1 products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 173; CX-1214 (Learn to Navigate Your X1 Guide). The X1 guides are controlled by a remote control having arrow keys. *See id.* However, claim 18 is not infringed because claim 15 is not infringed. *See Ferring*, 764 F.3d at 1411.

### (b) *Legacy System*

For claim 18, Rovi's entire argument is:

This claim limitation is satisfied by the Legacy Accused Products' infringement of claim 15 coupled with the capability of navigation controlled by user-activated direction keys provided on the remote controller. CX-0004C (Delp WS) at Q/A 239; CX-1207 (Comcast - Your Xfinity User Guide); CDX-0621C (Delp WS Demonstrative) at 142-43.

*Id.* at 290-91. Comcast does not present an argument for the accused Legacy products. *See* Resps. Br. at 318.

The administrative law judge has determined that the accused Legacy products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 239; CX-1207 (Comcast - Your Xfinity User Guide). The Legacy guides are controlled by a remote control having arrow keys. *See id.* However, claim 18 is not infringed because claim 15 is not infringed. *See Ferring*, 764 F.3d at 1411.

### c) *Claim 40*

Claim 40 follows:

40. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising:

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memory means for storing television program schedule information;

user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto;

data processing means for receiving said signals in response to said user control commands; and

a program schedule display generator coupled to said data processing means and said memory means for displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed.

JX-0001 at 36:32-60.

For claim 40, Rovi explains:

Claim 40 is nearly identical to claim 3. CX-0004C (Delp WS) at Q/A 6, 174. Claim 40 includes a requirement that “a program schedule display generator coupled to said data processing means and said memory means for displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal.” JX-0001 (‘556 Patent) at col. 36, lns. 45-50. Rather than a partial overlay, claim 40 requires a “simultaneous” display of a guide and program. CX-0004C (Delp WS) at Q/A 174. Simultaneous display can be thought of as picture in picture—none of either display is cut off. *Id.* at Q/A 175. In contrast, in the case of display by partial overlay, it is possible for part of the television program to be cut off. *Id.* at Q/A 175.

Rovi Br. at 291 (footnote omitted). Rovi then argues:

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The X1 '556 Patent Accused Products provide for the simultaneous display of a guide with a television show. CX-0004C (Delp WS) at Q/A 176. The default setting for the Mini Guide is to display scaled down version of the television program adjacent to the program schedule information. *Id.* The On-Screen Guide can also be configured to present a scaled down version of the television program (at the bottom right corner of the screen) while displaying program schedule information. *Id.*

*Id.* For the Legacy products, Rovi's entire argument is:

The Legacy Accused Products provide for the simultaneous display of a guide with a television show. CX-0004C (Delp WS) at Q/A 241.

*Id.* at 296-97.

For claim 40, Comcast does not present a specific argument for the accused X1 or Legacy products. *See* Resps. Br. at 318-19. However, Comcast argues:

Rovi's Pre-Hearing Brief failed to offer any construction for the disputed "program schedule display generator" terms of Claims 18(15) and 40, and arguments regarding these terms are waived. Under Comcast's un rebutted proposed construction, Claims 18(15) and 40 cannot be infringed by the Accused Products, which lack the recited structure or a then-existing 112(6) equivalent. Those same arguments apply in equal force to Rovi's allegations that Claim 7(3) is infringed.

*Id.* at 319.

The administrative law judge previously construed the "program schedule display generator" phase in claim 40 as a means-plus-function limitation and also found that the accused products do not satisfy the "video display generator" in claim 3 (limitation 3d). *See* Sections IV(A)(2)(c)(4); IV(A)(4)(a)(5). For the reasons provided in Sections IV(A)(2)(c)(4) and IV(A)(4)(a)(5), the accused X1 and Legacy products do not satisfy the "program schedule display generator" limitation, and thus do not infringe claim 40.

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*d) Comcast's Alternative Design*

Comcast argues that it has proposed an alternative design that does not infringe. *See* Resps. Br. at 338.

Rovi argues:

First, Comcast provided no evidence that its “alternative design” has been used in any set-top box—and the only evidence in the record is that it has not. CX-0004C (Delp WS) at Q/A 249. Second, Comcast never produced any code relating to any alternative design. Third, Comcast’s corporate witness testified that no alternative had been tested. *Id.* at Q/A 248. Finally, even if implemented, Comcast’s alleged alternative design for the ‘556 patent would not be practical as it would simply remove the overlay functionality. *Id.* at Q/A 251.

Rovi Br. at 297.

Comcast argues that its alternative design:

[

]

Resps. Br. at 338.

Rovi replies:

Comcast asserts that it provided “reworked” software for inspection prior to the close of discovery. Resps. Br. at 337. It did not. CX-0004C (Delp WS) at Q/A 245; Compls. Br. at 297. [

] it offers no evidence that it has been deployed—and the only evidence in the record is that it has not. CX-0004C (Delp WS) at Q/A 249, 251. Thus, Comcast’s “alternative design” is irrelevant.

Rovi Reply at 114.

The administrative law judge has determined that the alternative design(s) Comcast has identified are too hypothetical to adjudicate. Comcast’s witness testified that the proposed

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alternative has not been “alpha or beta” tested and has not been provided to customers since the Comcast-Rovi license expired. *See* JX-0109C (Nush Dep. Tr.) at 136-39; *see also* CX-0004C (Delp WS) at Q/A 244-49.

### 5. Indirect Infringement

In the event that the accused X1 or Legacy products are found to infringe the ‘556 Patent, the administrative law judge has analyzed Rovi’s inducement and contributory infringement arguments.

#### a) *Knowledge of the ‘556 Patent and Specific Intent to Infringe*

Indirect infringement requires that the infringer have specific intent to encourage infringement. *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1928 (2015) (“Section 271(b) requires that the defendant ‘actively induce[d] infringement.’ That language requires intent to ‘bring about the desired result,’ which is infringement.”); *see also Global-Tech Appliances, Inc., v. SEB S.A.*, 131 S. Ct. 2060 (2011). Such 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. *See, e.g., SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1384-85 (Fed. Cir. 2013); *Commil USA, LLC*, 135 S. Ct. at 1924-25; *Global-Tech*, 131 S. Ct. at 2071-72.

“Willful blindness” is sufficient to meet the knowledge and specific intent requirement of induced infringement. *Global-Tech*, 131 S. Ct. at 2071-72. A finding of willful blindness requires (1) the subjective belief in the high probability that a fact exists, and (2) the taking of deliberate steps to avoid learning of that fact. *Id.* at 2070. The first prong may be found upon a showing that the party “was successful in its attempts to develop various functions covered by



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the [asserted] patent into its products.” *See, e.g., Suprema*, 796 F.3d. at 1343. The failure to obtain opinion of counsel through which infringing conduct and/or the asserted patent(s) can be discovered can also support a finding of deliberate avoidance. *Suprema, Inc. v. Int’l Trade Comm’n*, 2015 WL 5315371, \*7 (Fed. Cir. Sept. 14, 2015) (panel remand).

As discussed below, the administrative law judge has determined that Rovi has shown Comcast was willfully blind to the circumstances surrounding its infringement of the ‘556 Patent.

Rovi argues that Comcast induces its product suppliers:

Comcast has induced, and continues to induce, its OEMs, ARRIS and Technicolor, to directly infringe the Asserted Claims of the Asserted Patents under 35 U.S.C. § 271(b) by, among other things: (1) purchasing the accused set-top boxes from Arris and Technicolor; (2) causing the manufacture and importation of infringing devices to occur; and (3) requiring the installation of the relevant software onto the set-top boxes prior to their importation. *See* Section VIII(F), *infra*; Section IV(B), *supra*. For example, Comcast [

] *Id.*

Rovi Br. at 297. Rovi also argues that Comcast induces its customers:

Comcast also induces its customers to directly infringe the ‘556 Patent by instructing its customers and end users to commit acts of infringement. Specifically, Comcast instructs, directs, or advises its users how to carry out direct infringement of the asserted claims. For example, Comcast provides its users CX-1693 (X1 Installation Video), which instructs its customers on how to install the X1 operating system so that they can use the Comcast X1 system. Likewise, Comcast provides its users CX-1694 (How to Use Your X1 Guide and DVR), which instructs its customers on how to use their X1 Guide and the DVR. *See also* CX-1695 (The X1 Platform from Xfinity) (online video which instructs its users on how to use the X1 platform); CX-1801-09 shows how Comcast instructs its customers to install and configure the X1 and Legacy services at the customers’ homes. These “self-installation” kits require customers to use the X1 and Legacy services in an

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infringing manner. Accordingly, Comcast induces users to operate the Accused Products in an infringing manner.

*Id.* at 297-98.

Comcast argues:

Under Respondents' proposed constructions of the disputed claim terms, the Accused Products do not infringe any of the Asserted Claims. Moreover, even if, *arguendo*, all of Respondents' proposed constructions that would result in a finding of non-infringement are ultimately not adopted by the ALJ, each proposed construction that would have resulted in a finding of non-infringement, whether independently or in combination with other terms, is still objectively reasonable, which rebuts any alleged "intent" to infringe. *See Commil*, 135 S. Ct. at 1928; RX-0848C (Grimes RWS) at Q/A 172 & 176. Rovi's conclusory assertions about indirect infringement for both the X1 and Accused Legacy STBs fail to cite any supporting evidence and thus cannot establish the requisite intent. *See id.* at Q/A 174-75. Similarly, ARRIS and/or Technicolor cannot infringe and cannot have the requisite intent to indirectly infringe, because they neither provide any IPG software installed on the STBs nor have any control over its parameters or features, which are instead determined by Comcast. *Id.* at Q/A 172.

Resps. Br. at 336-37.

To begin, Rovi has shown that Comcast had actual knowledge of the '556 Patent since at least since 2014, when Comcast and Rovi held license-renewal discussions. CX-1725C (Comcast Interrog. Resp.) at 11-13; *see also* CX-0275C (Email Chain between J. Finnegan and E. Rutter re: Follow Up on Your Presentation); CX-1505C (Rovi Patent Spreadsheet). Comcast does not argue that it lacked knowledge of the '556 Patent. *See generally* Resps. Br., Section XI(E). Further, Comcast knew, or was willfully blind to the high probability, that its actions would cause its suppliers and its customers to infringe the '556 Patent. Comcast previously licensed the '556 Patent (in other words, it paid for the right to infringe it). *See* CX-0001C

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(Armaly WS) at Q/A 114 (discussing the licensed patents and the license, JX-0051C). It also received claim charts articulating Rovi's infringement allegations and did not respond to them, and it has not disclosed any exculpatory opinion of counsel despite retaining opinion counsel. *Id.* at Q/A 114 (discussing the licensed patents and the license, JX-0051C), Q/A 120-24, 129-30 (discussing claim charts); RX-0860C (Comcast's Chief Patent Counsel's testimonial aid showing retention of opinion counsel); *Suprema, Inc. v. Int'l Trade Comm'n*, 626 F. App'x 273, 282 (Fed. Cir. 2015) (panel remand) (affirming conclusion of specific intent where the "Commission also found that Suprema's failure to obtain an opinion of counsel constituted an additional fact evidencing Suprema's willful blindness."').<sup>42</sup> Comcast even marked its Legacy Guide with the '556 Patent. *See* CX-1676 (Screenshot of Comcast Marking its Legacy Product with U.S. Patent No. 6,418,556); *see also* CX-0004C (Delp WS) at Q/A 127.

Comcast's assertions that the "reasonable claim constructions" it developed during the litigation negate its pre-suit intent do not rebut the facts that support finding it had the intent to infringe Rovi's patents. Additionally, Comcast's argument, if accepted, would negate § 271(b), because almost every accused infringer can advance a reasonable claim construction or non-infringement argument. *See Certain Semiconductor Chips and Products Containing Same*, Inv. No. 337-TA-753, USITC Pub. No. 4386, Comm'n Op. at 41 (Mar. 2013) (affirming finding of induced infringement where respondents asserted "they had plausible litigation defenses" because "[m]any or most accused infringers have such plausible defenses[.]").

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<sup>42</sup> To the extent Comcast argues it relied upon an opinion of counsel, it has not shown it relied upon the opinion. *See Bose Corp. v. SDI Techs., Inc.*, 558 F. App'x 1012, 1024 (Fed. Cir. 2014) ("Without proof of good-faith reliance, possession of the opinion alone is hardly dispositive of the state of mind necessary to avoid liability.").

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### *b) Indirect Infringement of the '556 Patent in the United States*

#### *(1) Comcast's Customers*

Rovi has not sufficiently shown that customers actually utilize the accused products—the X1 and Legacy guides—in an infringing manner. In particular, Rovi cites Comcast videos, webpage printouts, and installation materials to argue that Comcast's users infringe the '556 Patent.<sup>43</sup> See Rovi Br. at 298 ("These 'self-installation' kits require customers to use the X1 and Legacy services in an infringing manner."). Rovi does not cite the testimony of its expert, who opined, as follows:

**Q129. Do you have an opinion regarding indirect infringement of the '556 and '871 Patents by Comcast, Arris and Technicolor X1 set top boxes?**

A. In my opinion that each of Comcast, Arris and Technicolor indirectly infringe each asserted claim of each asserted Patent by induced or contributory infringement. This is because each X1 accused product contains all of the needed hardware and software to be capable of infringing at the time of importation, each such product is [

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<sup>43</sup> Rovi points to CX-1694 (How to Use Your X1 Guide and DVR), as an example of how Comcast instructs its customers on how to use their X1 Guide and the DVR. Rovi also cites CX-1695 (The X1 Platform from Xfinity) as an example of an online video which instructs its users on how to use the X1 platform). Comcast contends CX-1801-09 show how Comcast instructs its customers to install and configure the X1 and Legacy services at the customers' homes. In footnote 58, Rovi explains each exhibit, as follows:

CX-1801 (Xfinity Install/Activate Instructions); CX-1802 (X1 Self Installation Kit, What's Included); CX-1803 (X1 Self Installation Kit, Prepare for Installation.); CX-1804 (X1 Self Installation Kit, X1 Activation); CX-1805 (X1 Self Installation Kit, Contact us); CX-1806 (Legacy Self Installation Kit, What's Included); CX-1807 (Legacy Self Installation Kit, Prepare for Installation.); CX-1808 (Self Installation Kit Connection and Activation Overview Video); CX-1809 (Comcast Legacy Self Installation Kit, Contact Us). These "self-installation" kits require customers to use the X1 and Legacy services in an infringing manner.

See Rovi Br. at 298.

1

**Q130. Are the accused X1 set top boxes a staple article of commerce?**

A. No. The X1 boxes are not a staple article of commerce or generic component. Each X1 set top box contains hardware and software that is specifically adapted and is intended to infringe the asserted claims of the asserted Patents at the time of importation.

**Q131. Based on information you reviewed, does Comcast, Arris and Technicolor understand how the set top boxes will be used after importation?**

A. Yes. The information I reviewed, including deposition transcripts, confirms that Comcast, Arris, and Technicolor each understand that after each X1 set top box is imported to the United States each will be used by Comcast's customers and users of Comcast's domestic cable network, in its normal and expected way to access television and other programming and content on Comcast's domestic cable network. My understanding is that each X1 set top box is in fact used by users in its normal and expected manner. In my opinion, when used in that manner, each set top box necessarily infringes the asserted claims of the '556 and '871 Patents.

CX-0004C (Delp WS) at Q/A 129-131 (the Legacy products are not addressed).

Rovi's reliance on videos and installation instructions establishes that Comcast told its customers to install and use the accused products, not that the customers actually received the inducing instructions and performed them. In other words, while the evidence is probative of Comcast's intent and Comcast's actions, it does not establish that its customers actually used the claimed electronic programming guide. See RX-0848C (Grimes WS) at Q/A 174-76 (critiquing Dr. Delp's testimony); *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033-34 (Fed. Cir. 2002) (explaining the rule that "[u]pon a failure of proof of direct infringement, any claim of inducement of infringement also fails" and then reversing summary judgment of no

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infringement based upon evidence that the defendant demonstrated the product to prospective buyers).

Finally, the Joint Outline presents an issue of whether Comcast induces its customers to infringe under the doctrine of equivalents. *See* Joint Outline at 24. The administrative law judge found that the accused X1 and Legacy products do not infringe under the doctrine of equivalents. Rovi does not present any separate, substantive argument about inducing infringement in the context of its doctrine of equivalents arguments. Accordingly, the administrative law judge finds that Comcast does not induce its customers to infringe with the accused X1 and Legacy products under the doctrine of equivalents.

### (2) *Comcast's Suppliers*

For ARRIS and Technicolor, Rovi alleges “Comcast has induced, and continues to induce, its OEMs, ARRIS and Technicolor, to directly infringe the Asserted Claims of the Asserted Patents under 35 U.S.C. § 271(b)[.]” Resps. Br. at 297. Rovi argues that [

] Rovi Br. at 297. Rovi relies upon the same argument and evidence presented in its arguments that Comcast contributorily infringes the ‘556 Patent. *See id.* (citing “Section VIII(F), *infra*”).

Comcast argues that “ARRIS and/or Technicolor cannot infringe and cannot have the requisite intent to indirectly infringe, because [

] [RX-0848C (Grimes RWS)] at Q/A 172.” Resps. Br. at 337.

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The administrative law judge has determined that ARRIS and Technicolor do not contributorily infringe the ‘556 Patent. *See* Section IV(5)(c), *infra*. Further, Rovi has not sufficiently shown that Comcast had the requisite intent to induce ARRIS and Technicolor to infringe the ‘556 Patent. *See generally* Rovi Br., 297-98 (the evidence concerning user installation videos, the “How to Use Your X1 Guide and DVR” document, and other similar documents does not apply to ARRIS or Technicolor).

Accordingly, the administrative law judge has determined that Rovi has not shown that Comcast induces ARRIS and Technicolor induce infringement of the ‘556 Patent.

Finally, the Joint Outline presents an issue of whether ARRIS or Technicolor contribute to infringement under the doctrine of equivalents. *See* Joint Outline at 24. The administrative law judge found that the accused X1 and Legacy products do not infringe under the doctrine of equivalents. Rovi does not present any separate, substantive argument about contributory infringement in the context of its doctrine of equivalents arguments. Accordingly, the administrative law judge finds that Rovi has not shown that ARRIS or Technicolor contribute to infringement under the doctrine of equivalents.

### *c) Contributory Infringement of the ‘556 Patent*

To prevail on a contributory infringement claim, a complainant must show that, *inter alia*, the accused product is “not a staple article or commodity of commerce suitable for substantial noninfringing use[.]” *See* 35 U.S.C. § 271(c); *Fujitsu*, 620 F.3d at 1326 (“To establish contributory infringement, the patent owner must show the following elements relevant to this appeal: 1) that there is direct infringement, 2) that the accused infringer had knowledge of the patent, 3) that the component has no substantial noninfringing uses, and 4) that the component is a material part of the invention.”).

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When a “product is equally capable of, and interchangeably capable of both infringing and substantial non-infringing uses, a claim for contributory infringement does not lie.” *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1338 (Fed. Cir. 2012). The Federal Circuit has explained that “non-infringing uses are substantial when they are not unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.” *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1327 (Fed. Cir. 2009). A court may “consider not only the use’s frequency, but also the use’s practicality, the invention’s intended purpose, and the intended market” in determining if a particular use is substantial. *See i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 851 (Fed. Cir. 2010), *aff’d sub nom*, 564 U.S. 91 (2011). “For purposes of contributory infringement, ***the inquiry focuses on whether the accused products can be used for purposes other than infringement.***” *Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d at 1338 (emphasis added).

Rovi argues:

ARRIS and Technicolor directly infringe the ‘556 Patent as discussed above. ARRIS and Technicolor are contributory infringers of all the Asserted Claims of the ‘556 Patent because they import into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of the ‘556 Patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use. *See* Sections III, V(F), VI(I), VII(F), *supra*.

Rovi Br. at 302. Rovi then argues that ARRIS and Technicolor knew of the asserted patents at least since April 1, 2016, that the products do not have substantial non-infringing uses, that ARRIS and Technicolor “sign off” on Comcast software, and that the accused products are



[  
] *Id.* at 302-04.

Comcast argues:

Comcast has not induced direct infringement by another of the Asserted Claims as discussed above in subsection D, the Accused Products do not infringe the Asserted Claims. Nor can ARRIS and Technicolor directly infringe because they do not import products that satisfy the recited limitations of the Asserted Claims. RX-0848C (Grimes RWS) at Q/A 177. For both X1 and Legacy STBs, neither ARRIS nor Technicolor imports the user control means identified by Dr. Delp (*i.e.*, remote controls), without which ARRIS and Technicolor cannot infringe. *Id.* For X1, Rovi has not demonstrated that the recited “data processing means” limitations, which control “partial overlay” or “simultaneous display” are imported, or sold after importation by ARRIS or Technicolor. *Id.* There is no such processor in any ARRIS or Technicolor STB for the X1 Accused Products, because that functionality is provided by [ ] in the cloud, as discussed above. See §§ I.E., I.G, VI.A.

Resps. Br. at 336.

(1) *X1 System*

The administrative law judge has determined that Rovi has fallen short of meeting its burden of showing that the accused products have no substantial non-infringing uses; rather, the evidence shows that the accused products have many substantial non-infringing uses, such as watching television programs. RX-0848C (Grimes RWS) at Q/A 170. Further, Rovi’s expert testified that he did not provide any analysis on this issue:

Q. Okay. In your patent -- in your witness statement, you talk about indirect infringement. Do you recall that?

A. Yes.

Q. Okay. But I didn’t see you anywhere in your witness statement mention whether the accused products are a commodity of commerce suitable for substantial noninfringing use.

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A. I don't recall if I put that in my witness -- if that's in my witness's statement or not.

Q. I didn't see it in there. Do you remember? You don't remember?

A. It's a pretty big statement. I don't -- I don't remember.

...

Q. And you don't have any analysis in your witness statement, I think we've already established that, that the X1 box is a commodity of commerce suitable for substantial noninfringing use? You don't have any opinions on that?

A. Well, I don't recall whether there's anything in my witness statement to that effect.

Tr. 987-988, 1019; *see also* Rovi Br., Section VIII(F) (Rovi does not address this issue).

Accordingly, the accused X1 products do not contributorily infringe the '556 Patent.

(2) *Legacy System*

Rovi does not advance a separate argument for the accused Legacy products. *See generally* Rovi Br., Section VIII(F). Likewise, Comcast does not advance a separate argument for the accused Legacy products. *See* Resps. Br., Section XI(E)(4).

Accordingly, as with the X1 products, the administrative law judge has determined that Rovi fell short of meeting its burden of showing that the accused Legacy products have no substantial non-infringing uses.

**6. Domestic Industry – Technical Prong**

Rovi has identified its i-Guide and Passport Systems, the SuddenLink System, and a Verizon guide as the domestic industry products. *See* Rovi Br. at 304. Rovi contends these products practice claims 7, 18, and 40.

Comcast presents a three-part omnibus critique of Rovi's domestic industry case for the '556 Patent. *See* Resps. Br. at 339-40. Comcast argues:

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- 1) Rovi did not “address any hardware limitations for its Passport and SuddenLink’s iGuide IPGs”
- 2) Rovi “only addresse[d] the preamble of Claim 3 for the Passport IPG” and did not address any “specific claim for the SuddenLink iGuide product”
- 3) Rovi did not establish the DI products’ memory means, display generators, and data processing means are 112(6) equivalents.

*Id.* These arguments are addressed below.

*a) Claims 3 and 7*

*(1) Limitation 3pre*

The text for this limitation is “3. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising[.]” *See* Rovi Br. at 278.

*(a) Rovi i-Guide & Passport*

Rovi argues:

The Rovi i-Guide and Rovi Passport products (collectively, the “Rovi Guides”) may be considered together as both [ ] and have the same features as they apply to the ‘556 Patent. CX-0004C (Delp WS) at Q/A 252, 254. The Rovi Guides are designed to be used with a television system including a receiver capable of tuning to multiple channels. *Id.* The purpose of the Rovi Guides is displaying television programs and program schedule information. *Id.*; CX-1594 (i-Guide Screenshots (including Total Guide xD) for the ‘556 Patent) at 1.

Rovi Br. at 304-05.

The administrative law judge has determined that the Rovi products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 255 (“The i-Guide is implemented on set-top boxes, such as the [ ] and accompanying remote control devices, loaded with Rovi i-Guide software. I call this the ‘i-Guide System’.”).

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(b) *SuddenLink*

Rovi's entire argument for every limitation of the SuddenLink guide follows:

SuddenLink uses the Rovi i-Guide for its set-top box. CX-0004C (Delp WS) at Q/A 329. The SuddenLink Guide practices Claims 3, 15, and 18 for the same reasons the Rovi i-Guide practices those claims. *Id.*; *see also* CX-1613 (SuddenLink Screenshots for the '556 Patent) (providing screenshots of the i-Guide implemented in a SuddenLink set-top box).

Rovi Br. at 307. Dr. Delp's testimony is based on a review the SuddenLink Licensee guide (*i.e.*, the program guide) and screenshots taken by another expert witness. *See, e.g.*, CX-0004C (Delp WS) at Q/A 328 (the Licensee guide is referenced, but no exhibit is cited); CX-1613 (these are SuddenLink screenshots); CX-1764C (this is the "initial expert report of Jim C. Williams" that contains SuddenLink screenshots); CX-0005C (Williams WS) at Q/A 189-90. Dr. Delp did not analyze any particular set-top box:

**Q329. Based on that review [of the SuddenLink Licensee Guide], do you have an opinion as to whether the SuddenLink licensee guide, as displayed from set top boxes, practices claims of the '556 Patent?**

A. Yes, in my opinion, this guide, as displayed from set top boxes, practices claims of the '556 Patent. SuddenLink uses the Rovi i-Guide System for its set top box. Accordingly, for the same reasons that Rovi's i-Guide System practices claims 3, 15, and 18, the SuddenLink guide operating on a set top box practices these same claims. *See generally* CX-1613 and CDX-0646.

CX-0004C (Delp WS) at Q/A 329.

The administrative law judge has determined that Rovi has not shown that the SuddenLink products satisfy the domestic industry technical prong. With regard to the preamble, neither Rovi nor Dr. Delp has identified the television receiver mentioned in the preamble (limitation 3pre). Further, neither Rovi nor Dr. Delp has identified the claimed memory means (limitation 3a), user control (limitation 3b), data processor (limitation 3c), or

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video display generator (limitation 3d). *See* CX-0004C (Delp WS) at Q/A 329. This is not sufficient to support a finding that the Rovi products practice these limitations.

### (c) *Verizon FiOS*

Rovi argues that the FiOS guide, which is run on the [ ] set-top boxes and includes a remote control, when operating in “mini guide” mode, satisfies this limitation. *See* Rovi Br. at 307; CX-0004C (Delp WS) at Q/A 310-11.

The administrative law judge has determined that the Verizon products satisfy this limitation. *See* CX-0004C (Delp WS) at Q/A 311 (“The FiOS System includes television receivers, including set-top boxes, such as the [ ] and accompanying remote control devices. As implemented, the FiOS System generates a mini guide, which displays television programs and program schedule information for the television programs.”).

### (2) *Limitation 3a*

The text for this limitation is “memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels[.]” *See* Rovi Br. at 280.

### (a) *Rovi i-Guide & Passport*

Rovi’s entire argument is:

[

]

Rovi Br. at 305. Dr. Delp’s testimony on this limitation follows:

**Q257. Let’s turn to limitation 3a, which requires a “memory means for storing television program schedule information for**

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a set of television programs scheduled to appear on said plurality of television channels;" In your opinion, does the Rovi i-Guide practice this limitation?

A. [ .

]

CX-0004C (Delp WS) at Q/A 257. JX-0110C (Oliver Tr.) at 30:19-24, which was not designated testimony, follows:

Q. [

A.

]

JX-0110C (Oliver Tr.) at 65:17-22 follows:

Q. (BY MR. CAMPBELL) I'll rephrase the question slightly. The iGuide software, is that stored in memory on the set top box?

A. [ .

Q.

A. ]

CX-0372 is a webpage from the "Electronics 360" page. The webpage indicates an October 28, 2011 byline, and it attributes the work to "IHS Technology Teardown Services." *Id.* at 1.

For the memory means, Comcast argues that Rovi did not identify the memory means and that "Rovi has failed to even allege that each element existed at the time of patenting; the

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cited documentation, if anything, shows that these memory elements did not exist at that time.”  
Resps. Br. at 340.

The administrative law judge has determined that Rovi has not shown that its products practice this limitation. [

] *See also* RX-0848C (Grimes RWS) at Q/A 186-87. Rovi and Dr. Delp’s citation to JX-0110C (Oliver Tr.) does not identify a memory within the set-top box. Likewise, Rovi and Dr. Delp’s reliance upon CX-0372 (the “Teardown” document) does not identify a memory that corresponds to the claim “memory means.” Moreover, the source of the exhibit is not explained, there is no indication that the “Teardown” is accurate, and there is no confirmation that the boxes described in the Teardown were actually equipped with a Rovi guide. *See* CX-0372 (the “Target Market” for the boxes is “North American cable service operators - specifically (as labeled on this device) Comcast”). For these reasons, Rovi has not shown that its products meet the “memory means” limitation (3a).

*(b) SuddenLink*

The administrative law judge has determined that Rovi has not shown that the SuddenLink products satisfy this limitation. Neither Rovi nor Dr. Delp has identified the claimed memory means (limitation 3a). This is not sufficient to support a finding that the Rovi products practice this limitation.

*(c) Verizon FiOS*

Rovi’s entire argument is:

[

]

Rovi Br. at 307. Dr. Delp's testimony follows:

**Q312. Please look at 3a: “memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels;” In your opinion, does the FiOS guide as displayed from a set top box practice this limitation?**

A. Yes. The Verizon FiOS receivers, such as the [ ] have a memory for storing television program schedule information, which is shown in the [ ] Installation and Operation Manual, CX-1145C.

**Standard Data Features**

- 1 GB flash memory
- 2 GB SDRAM
- One rear Universal Serial Bus (USB) 2.0 port
- 10/100/1000 Mbps Ethernet Port (RJ-45)

**Q313. How is the memory used?**

A. [ ]

Comcast's expert testified that Dr. Delp did not identify which memory actually performs the claimed function. RX-0848C (Grimes RWS) at Q/A 210-13.

The administrative law judge has determined that Rovi has not shown that the Verizon products practice this limitation. As a threshold matter, neither Rovi nor Dr. Delp has identified the memory in the set-top boxes that performs the corresponding function—[

] which is not sufficient for finding that the boxes meet this § 112(6) limitation. Further, no explanation or support is provided for the



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[ For these reasons, Rovi has not shown that its products meet the “memory means” limitation (3a).

### (3) *Limitation 3b*

The text for this limitation is “user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto[.]” See Rovi Br. at 280.

#### (a) *Rovi i-Guide & Passport*

Rovi’s entire argument is:

The Rovi Guides include a remote controller that may be used for television tuning and guide control including the transmission of signals related to such functions. CX-0004C (Delp WS) at Q/A 258; JX-0110C (Oliver Dep. Tr.) 16, 71-72, 74, 88; CX-1232C (Rovi - Inside i-Guide HD User Guide, Ver. R32) at 616-17; CX-1594 (i-Guide Screenshots (including Total Guide xD) for the ‘556 Patent) at 1-3.

Rovi Br. at 305.

The administrative law judge has determined that it is more likely than not that the Rovi products satisfy this limitation. The evidence indicates that a remote control is provided with a set-top box, and it is given that users use the remote control. See CX-1232C at 10 (ROVI\_CC-ITC00485083); JX-0110C (Oliver Dep. Tr.) at 71-72, 74, 88.

#### (b) *SuddenLink*

The administrative law judge has determined that Rovi has not shown that the SuddenLink products satisfy this limitation. Neither Rovi nor Dr. Delp has identified the claimed user control means (e.g., the remote control). This is not sufficient to support a finding that the Rovi products practice this limitation.

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(c) *Verizon FiOS*

Rovi argues:

The Verizon FiOS Guide includes a remote controller that may be used for television tuning and guide control including the transmission of signals related to such functions. CX-0004C (Delp WS) at Q/A 314-15; CX-1145C (Installation Manual – [ ] at 36, 45; CX-1624 (Verizon FiOS Screenshots for the ‘556 Patent) at 2. The Verizon FiOS Guide is navigable. CX-0004C (Delp WS) at Q/A 314-15; CX-1624 (Verizon FiOS Screenshots for the ‘556 Patent) at 2.

Rovi Br. at 307.

The administrative law judge has determined that it is more likely than not that the Verizon products satisfy this limitation. The evidence indicates that a remote control is provided with a set-top box, and it is given that users use the remote control. *See* CX-1145C (Installation Manual – [ ] at 36, 45; CX-1624 at 2; *see also* CX-0004C (Delp WS) at Q/A 314 (discussing IR receivers).

(4) *Limitation 3c*

The text for this limitation is “data processing means for receiving said signals in response to said user control commands[.]” *See* Rovi Br. at 281.

(a) *Rovi i-Guide & Passport*

Rovi’s entire argument is:

[

]

Rovi Br. at 305. Dr. Delp testified that:

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**Q259. Please look at limitation 3c, which says “data processing means for receiving said signals in response to said user control commands;” In your opinion, does the Rovi i-Guide practice this limitation?**

A. [

]

CX-0004C (Delp WS) at Q/A 259 (emphasis added).

Comcast argues:

. . . Rovi has failed to even allege that each element existed at the time of patenting; the cited documentation, if anything, shows that these memory elements did not exist at that time. RX-0848C (Grimes RWS) at Q/A 186-87 (Rovi iGuide); 211-13 (FiOS). This same deficiency applies to the elements that Rovi relies upon for the “display generator” and “data processing means” terms. *See id.* at 188 (Rovi iGuide). . . .

Resps. Br. at 340.

The administrative law judge has determined that Rovi has not shown that its products practice this § 112(6) limitation. Neither Rovi nor Dr. Delp has identified a processor in the representative Motorola boxes, and Dr. Delp’s opinion that “any processor is equivalent” is not sufficient to support a finding that the Rovi products practice this limitation. *See* RX-0848C (Grimes RWS) at Q/A 186-87.

(b) *SuddenLink*

The administrative law judge has determined that Rovi has not shown that the SuddenLink products satisfy this limitation. Neither Rovi nor Dr. Delp has identified the

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claimed data processor. This is not sufficient to support a finding that the Rovi products practice this limitation.

(c) *Verizon FiOS*

Rovi's entire argument is:

[

]

Rovi Br. at 307-08.

The administrative law judge has determined that Rovi has not shown that the Verizon products practice this § 112(6) limitation. [

] and Dr. Delp's opinion that the Verizon products [ ] is not sufficient to support a finding that the Rovi products practice this limitation. *See* RX-0848C (Grimes RWS) at Q/A 215.

(5) *Limitation 3d*

The text for this limitation is "a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide[.]" *See* Rovi Br. at 283.

(a) *Rovi i-Guide & Passport*

Rovi's entire argument is:

[

]

Rovi Br. at 305-06.

Comcast argues:

. . . Rovi has failed to even allege that each element existed at the time of patenting; the cited documentation, if anything, shows that these memory elements did not exist at that time. RX-0848C (Grimes RWS) at Q/A 186-87 (Rovi iGuide); 211-13 (FiOS). This same deficiency applies to the elements that Rovi relies upon for the “display generator” and “data processing means” terms. *See id.* at 188 (Rovi iGuide). . . .

Resps. Br. at 340.

Dr. Delp testified, as follows:

**Q260. . . . In your opinion, does the Rovi iGuide practice this limitation?**

A. It does. [

]

[

]

The administrative law judge has determined that Rovi has not shown that its products practice this § 112(6) limitation. As with the accused X1 products, Dr. Delp’s testimony at Q/A 260-61 does not demonstrate, or sufficiently explain, [

] is identical or equivalent to the corresponding structures in the specification—a VGA-type graphics card (such as a Rocgen card manufactured by Roctec) and a “Video Overlay Device.” *See MobileMedia Ideas*.<sup>44</sup>

(b) *SuddenLink*

The administrative law judge has determined that Rovi has not shown that the SuddenLink products satisfy this limitation. Neither Rovi nor Dr. Delp has identified the claimed video display generator (limitation 3d). This is not sufficient to support a finding that the Rovi products practice this limitation.

---

<sup>44</sup> *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1170 (Fed. Cir. 2015) (“Literal infringement of a § 112 ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.”).

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(c) *Verizon FiOS*

Rovi's entire argument is:

The Verizon FiOS Guide includes [

]

Rovi Br. at 308.

The administrative law judge has determined that Rovi has not shown that its products practice this § 112(6) limitation. Neither Rovi nor Dr. Delp has identified a specific video display generator in the [ ] and Dr. Delp's opinion that the boxes have "graphics circuitry" is not sufficient to support a finding that the Rovi products practice this limitation. *See* RX-0848C (Grimes RWS) at Q/A 216-17.

(6) *Limitations 3e-3g*

Rovi address the "data processing means controlling" limitations, limitations 3e-3g, together. *See* Rovi Br. at 306. For reference, the text for these limitations follows:

- [3e] "said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal[.]" *See* Rovi Br. at 285.
- [3f] "each said portion comprising listing information for each successive one of said television programs scheduled to appear on said set of channels and being consecutively displayed in response to corresponding consecutive ones of said guide

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control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means[.]” *See* Rovi Br. at 286.

- [3g] “said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information.” *See* Rovi Br. at 288.

(a) *Rovi i-Guide & Passport*

Rovi argues:

[

]

Rovi Br. at 306.

The administrative law judge has determined that Rovi has shown it is more likely than not that its products satisfy limitations 3e and 3g, but not 3f.

For limitation 3e, the evidence shows that the Rovi guides can display program schedule information in a partial overlaying relationship with a currently showing program. *See* CX-1594 at 1-3.

For limitation 3f, the administrative law judge previously determined that the prosecution history, figures, and specification all indicate that “Browse Mode” lists information corresponding to a single program at one time. *See* Section IV(A)(2)(c)(6). The evidence that



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Rovi relies upon, CX-0004C (Delp WS) at Q/A 262-64; CX-1594 at 1-3, shows guides with listing information for multiple programs or channels. Accordingly, the administrative law judge has determined that the Rovi products do not meet this limitation.

For limitation 3g, the administrative law judge has determined that the Rovi products allow a user to select a television program from the overlay guide. See CX-0004C (Delp WS) at Q/A 264; CX-1594 at 1-6.

### (b) *SuddenLink*

The evidence, CX-1613, shows it is more likely than not that the guide can display program listings in an overlaying relationship (limitation 3e) and that a user can select a program from that guide (limitation 3g), but it does not show that the guide lists program information corresponding to a single program at one time (limitation 3f).

### (c) *Verizon FiOS*

Rovi argues:

I

I

Rovi Br. at 308.

The evidence, CX-1624, shows it is more likely than not that the guide can display program listings in an overlaying relationship (limitation 3e) and that a user can select a program

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from that guide (limitation 3g), but it does not sufficiently show, and no explanation is provided, that the guide lists program information corresponding to a single program at one time (limitation 3f).

### (7) *Claim 7*

Rovi does not allege that the i-Guide and Passport, SuddenLink, or Verizon products practice claim 7. *See generally* Rovi Br., Section VIII(G).

### *b) Claims 15 and 18*

#### *(a) Rovi i-Guide & Passport*

Rovi's entire argument for both claims is:

Claim 15 includes the same limitations as claim 3 except it includes limitations directed to reminder messages. CX-0004C (Delp WS) at Q/A 236, 265. Claim 15 is satisfied for the same reasons as claim 3. *Id.* at Q/A 265. With regard to the "reminder message" limitations, the Rovi Guides display reminder selection messages in the claimed manner. CX-0004C (Delp WS) at Q/A 266 (discussing CX-1594 (i-Guide Screenshots (including Total Guide xD) for the '556 Patent) at 28-29). Claim 18 states: "The television schedule system according to claims 14, 15, 16, or 17 wherein the navigation is controlled by user-activated direction keys provided on said user control means." This claim limitation is satisfied by the Rovi Guides because they include the capability of navigation controlled by user-activated direction keys provided on the remote controller. CX-0004C (Delp WS) at Q/A 267.

Rovi Br. at 306.

The administrative law judge has determined that Rovi has shown that the i-Guide and Passport products practice the limitations of claim 18. The evidence Rovi cites shows the display of a reminder selection. *See* CX-1594 at 29 (a reminder-bell icon is shown next to "TV-

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PG”). However, the Rovi products do not practice claim 15 for the same reasons they do not practice claim 3. *Cf. Ferring*, 764 F.3d at 1411.<sup>45</sup>

(b) *SuddenLink*

Rovi argues that the “SuddenLink Guide practices Claims 3, 15, and 18 for the same reasons the Rovi i-Guide practices those claims.” Rovi Br. at 307.

The administrative law judge has determined that the Rovi has not shown the i-Guide practices claims 3, 15, and 18. Accordingly, the administrative law judge has determined that the SuddenLink guide does not practice claims 3, 15, and 18 for the same reasons the Rovi i-Guide does not practice those claims. *Cf. Ferring*, 764 F.3d at 1411.

(c) *Verizon FIOS*

Rovi’s entire argument is:

Claim 15 is satisfied for the same reasons as claim 3. With regard to the “reminder” limitations, the Verizon FiOS Guide display provides the capability for displaying reminder messages as claimed. CX-0004C (Delp WS) at Q/A 324-25; CX-1624 (Verizon FiOS Screenshots for the ‘556 Patent) at 18. Claim 18 is satisfied by the Verizon FiOS Guide because it includes the capability of navigation controlled by user-activated direction keys provided on the remote controller. CX-0004C (Delp WS) at Q/A 326.

Rovi Br. at 309.

The administrative law judge has determined that Rovi has shown that the Verizon products practice claim 18. The evidence Rovi cites shows that the guide can display a reminder selection. *See* CX-1624 at 21. However, the Verizon products do not practice claim 15 for the same reasons they do not practice claim 3. *Cf. Ferring*, 764 F.3d at 1411.

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<sup>45</sup> In *Ferring*, the Federal Circuit found a dependent claim not infringed because its corresponding independent claim was not infringed. *Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) (“Because we hold that the asserted independent claims of Ferring’s patents are not infringed, the asserted dependent claims are likewise not infringed.”).

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### *c) Claim 40*

Rovi does not allege that the i-Guide and Passport, SuddenLink, or Verizon products practice claim 40. *See generally* Rovi Br., Section VIII(G).

### **7. Validity**

Comcast contends that Florin anticipates the asserted claims, that seven distinct prior art combinations, based on six prior art references, render the asserted claims obvious, and that the ‘556 Patent’s asserted claims are invalid under the non-statutory double patenting doctrine. *See* Resps. Br., Section XI(H). The six prior art references are:

- 1) Florin (RX-0215, U.S. Patent No. 5,621,456);
- 2) Young ‘268 (RX-0214, U.S. Patent No. 5,479,268);
- 3) Reiter (RX-0188, U.S. Patent No. 4,751,578);
- 4) Moro (RX-0216, European Patent Specification Pub. No. 0 444 496 A1);
- 5) Young ‘121 (RX-0253, U.S. Patent No. 4,706,121); and
- 6) Strubbe (RX-0218, U.S. Patent No. 5,047,867).

*Id.* The seven obviousness combinations are:

- 1) Florin (claims 7, 18, and 40);
- 2) Young ‘268 (claims 7 and 40);
- 3) Young ‘268 + Reiter (claims 7 and 40);
- 4) Young ‘268 + (Young ‘121 and/or Strubbe) (claim 18);
- 5) Young ‘268 + Reiter + (Young ‘121 and/or Strubbe) (claim 18);
- 6) Moro + (Young ‘268 and/or Reiter) (claims 7 and 40); and
- 7) Moro + (Young ‘268 and/or Reiter) + Strubbe (claim 18).

*Id.* The double-patenting references are:

- 1) U.S. Patent No. 6,728,967 (RX-0211) (the “‘967 Patent”) and

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2) U.S. Patent No. 7,100,185 (RX-0212) (the “185 Patent”).

*Id.* Comcast has also argued that the asserted claims are indefinite because, with respect to the data processing means, “the written description fails to provide the requisite structure; the only disclosed structure is a general purpose processor, and no code or algorithms are disclosed.”

Resps. Br. at 297-98.

### *a) Anticipation*

Comcast argues that Florin (RX-0215) anticipates the asserted claims under Rovi’s constructions.<sup>46</sup> *See* Resps. Br., Section XI(H)(2)(c). Comcast then presents a combined argument that the asserted claims are anticipated under its own constructions or “trivially obvious over Florin alone.” *Id.*, Section XI(H)(2)(d); *but see* RX-0005C (Grimes WS) at Q/A 133 (testifying that Florin does not anticipate the asserted claims under Comcast’s construction).

Rovi argues that Florin is not prior art and that even if it is, “Florin does not disclose every element of any asserted claim of the ‘556 Patent.” Rovi Br. at 315. Rovi then argues that Florin does not disclose a “partially overlaid” configuration. *See* CX-1903C (Delp RWS) at Q/A 165 (limitation 3f is the only limitation Rovi contests).

For analyzing means-plus-function anticipation arguments, the Federal Circuit has explained:

It is firmly established in our precedent that a structural analysis is required when means-plus-function limitations are at issue; a functional analysis alone will not suffice. *See, e.g., CytoLogix Corp. v. Ventana Med. Sys.*, 424 F.3d 1168, 1178 (Fed. Cir.2005) (“To establish infringement under § 112, ¶ 6, it is insufficient for the patent holder to present testimony ‘based only on a functional, not a structural, analysis.’” (quoting *Alpex Computer Corp. v. Nintendo Co.*, 102 F.3d 1214, 1222 (Fed. Cir.1996))). Just as a patentee who seeks to prove infringement must provide a structural analysis by demonstrating that the accused device has the

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<sup>46</sup> Florin was disclosed to the Examiner. *See* JX-0001 at 3.

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identified corresponding structure or an equivalent structure, a challenger who seeks to demonstrate that a means-plus-function limitation was present in the prior art must prove that the corresponding structure—or an equivalent—was present in the prior art.

*Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 582 F.3d 1288, 1299 (Fed. Cir. 2009).

(1) *Florin (RX-0215) is prior art*

Rovi argues that evidence pertaining to conception and reduction to practice was submitted in an interference proceeding:

This evidence was all accepted by the Examiner in concluding that the '556 Patent was entitled to a priority date earlier than the March 19, 1993 filing date of the Young 5,353,121 patent (referred to as the Young *et al.* patent to avoid confusion with the Young 4,706,121 patent (filed May 6, 1986)). JX-0008 ('556 Patent File History) at 797 (Aug. 24, 1995 Office Action); Grimes Tr. 1087-91.

See Rovi Br. at 310-12; JX-0008 (Part 5) at 797 ("The declaration filed on 4/13/95 under 37 C.F.R. § 1.131 is sufficient to overcome the Young et al reference."). In summary, Rovi argues that "the '556 invention was conceived by May 20, 1992 and [actually] reduced to practice by July 14, 1992." Rovi Br. at 312. Rovi explains that the prototype was publicly "demonstrated . . . at the Western Cable Show in Anaheim, California on December 2, 1992." *Id.* at 313 (citing CX-0880 (Margolis Decl.)).

Comcast argues that Rovi did not establish that the claims were reduced to practice before September 9, 1993, the filing date. See Resps. Br. at 313-14 (citing, *inter alia*, *In re Omeprazole Patent Litig.*, 536 F.3d 1361, 1373 (Fed. Cir. 2008)).

Prior art under 35 U.S.C. § 102(g) may be "asserted as a basis for invalidating a patent in defense to an infringement suit." *Checkpoint Sys., Inc. v. U.S. Int'l Trade Comm'n*, 54 F.3d 756, 761 (Fed. Cir. 1995). Respondents bear the burden of showing, through clear and convincing

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evidence, that the asserted claims are invalid under § 102(g). *See Fox Grp., Inc. v. Cree, Inc.*, 700 F.3d 1300, 1304 (Fed. Cir. 2012). A patentee may avoid § 102(g) prior art by establishing prior invention under 35 U.S.C. 102(g)(2). *Id.* To establish prior invention, the patentee must show that “(1) it reduced its invention to practice first . . . or (2) it was the first party to conceive of the invention and then exercised reasonable diligence in reducing that invention to practice.”

*Id.* For an actual reduction to practice:

a party must prove that the inventor (1) “constructed an embodiment or performed a process that met all the limitations” and (2) “determined that the invention would work for its intended purpose.” *Id.* (quoting *Cooper v. Goldfarb*, 154 F.3d 1321, 1327 (Fed. Cir. 1998)). “Testing is required to demonstrate reduction to practice in some instances because without such testing there cannot be sufficient certainty that the invention will work for its intended purpose.” *Id.* (quoting *Slip Track Sys., Inc. v. Metal-Lite, Inc.*, 304 F.3d 1256, 1267 (Fed. Cir. 2002)).

*In re Omeprazole Patent Litig.*, 536 F.3d 1361, 1373 (Fed. Cir. 2008); *cf. Eaton v. Evans*, 204 F.3d 1094, 1097 (Fed. Cir. 2000) (“there can be no actual reduction to practice if the constructed embodiment or performed process lacks an element recited in the count or uses an equivalent of that element.”).

If respondents can put forth a *prima facie* case of invalidity, the patentee must show that the invention predates the reference with “sufficient rebuttal evidence.” *See Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1322 (Fed. Cir. 2013) (“After an accused infringer has put forth a *prima facie* case of invalidity, the burden of production shifts to the patent owner to produce sufficient rebuttal evidence to prove entitlement to an earlier invention date.”). The ultimate burden of invalidity, however, remains with respondents. *Id.*

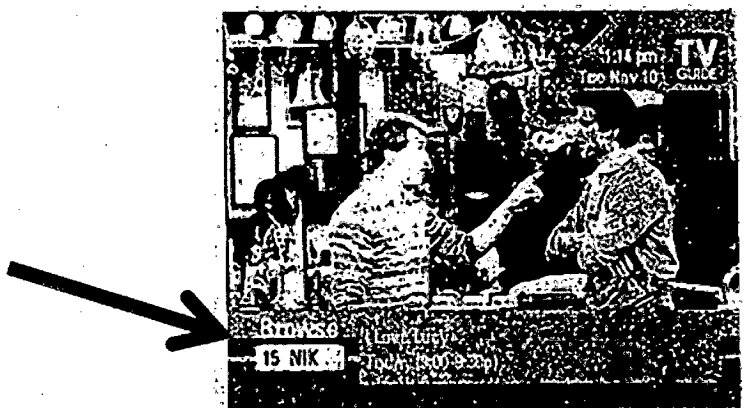
As discussed below, the administrative law judge has determined that Florin is prior art under § 102(g). The administrative law judge finds that Comcast has shown, by clear and

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convincing evidence, that Rovi's prototype did not literally meet all of the limitations of claim 3. The evidence that Rovi relies upon (the file history) is not sufficient to rebut Comcast's showing.

The evidence Rovi relies upon does not identify the structures used in the prototype shown at the Western Cable Show. *See* Resps. Br. at 315; RX-0005C (Grimes WS) at Q/A 85-88; RX-0848C (Grimes RWS) at Q/A 88. In particular, the Morris declaration describing the prototype explains that the EPG "was installed on a personal computer that was attached to a TV monitor." CX-0880 at 16; Rovi Br. at 313. This does not satisfy the § 112(6) "display generator" limitation, because no graphics card (or GPU) is identified. *See* RX-0005C (Grimes WS) at Q/A 88; *see also Eaton*, 204 F.3d at 1097 ("there can be no actual reduction to practice if the constructed embodiment or performed process lacks an element recited in the count or uses an equivalent of that element."). Further, the evidence does not show that the Western Cable Show prototype could "select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information" (limitation 3g). For example, although the Morris Declaration (CX-0880 at 189) includes a brochure describing "Browse Mode" as a feature allowing a user to "remain on one channel and 'browse' through program listings of other channels and lime periods by first pressing the TV Guide button then pressing the up/down arrows to scan through channels and the left/right arrows to scan through time slots[,] it does not indicate that the user can select a show from "Browse Mode." The brochure depicts Browse Mode, as follows:





CX-0880 at 189 (ROVI\_ CC-ITC00048364) (red arrow added).

Accordingly, the administrative law judge has determined that Rovi has not shown it is entitled to an earlier invention date based upon the Western Cable Show prototype.<sup>47</sup>

(2) *Comcast's Joint Anticipation and Obviousness Argument*<sup>48</sup>

Comcast jointly argues that Florin anticipates the asserted claims and that the asserted claims are also “trivially obvious” over Florin Alone. *See* Resps. Br. at 349-50. Comcast argues:

To the extent that, *under Comcast's proposed claim constructions*, Florin “‘d[oes] not expressly spell out’ all the limitations arranged or combined as in the claim,” ***Florin anticipates the Asserted Claims*** because a POSITA “reading the reference, would ‘at once envisage’ the claimed arrangement or combination.” *Blue Calypso*, 815 F.3d at 1341 (quoting *Kennametal*, 780 F.3d at 1381); *see* RX-0005C at Q/A 129. Florin anticipates because it teaches “that the disclosed components or functionalities may be combined and one of skill in the art would be able to implement the combination.” *Id.*; *see also Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1379 (Fed. Cir. 2001).

<sup>47</sup> The Joint Outline presents an issue of determining the priority date for the ‘556 Patent. *See* Joint Outline at 25. Given that Rovi has not presented evidence that it is entitled to an earlier priority date, the administrative law judge finds that the priority date is September 9, 1993, the filing date.

<sup>48</sup> This section analyzes Comcast’s anticipation arguments under its claim constructions.

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Under Comcast's construction, the structure to implement an interactive single program listing displayed in partial overlay with a video signal is taught. Florin teaches the disclosed functionalities combined in a single EPG, and a POSITA would be able to implement the combination in this predictable art. RX-0005C at Q/A 129 & 133. At worst, it would have been less than trivially obvious to a POSITA in view of the disclosure of Florin, which discloses both (a) interactively navigable program listings including those for other channels and future times in a partial overlay with a video signal being viewed and (b) an interactive overlay of program schedule information for the currently viewed program shown in a partial overlay over the current video signal. *Id.* at Q/A 129. Based on what is disclosed in Florin alone, it would have been, at worst, trivially obvious to tweak the express disclosure of Florin to provide the program listing under Comcast's constructions. *See id.* A visual depiction of this internal teaching of Florin is shown at RDX-0968-71 (RX-0215 modified figs.).

*Id.* (emphasis added). In RX-0005C (Grimes WS) at Q/A 129, Dr. Grimes testified about the video display generator and the A/V Connect Module (66). In A129, he concluded that under Comcast's constructions, the asserted claims "would have been obvious" and that it "would have been trivially obvious to tweak the express disclosure of Florin to provide the program listing under Comcast's constructions." *Id.* In Q/A 133, Dr. Grimes testified, as follows:

**Q133. Under Comcast's constructions, does Florin anticipate the Asserted Claims?**

A133. No, under Comcast's constructions, *the Asserted Claims are instead obvious in view of Florin*. In particular, the interactive partial overlay shown in Florin contains multiple program listings, not a single program listing as required by Comcast's constructions of the Asserted Claims. However, because Florin discloses another embodiment with an interactive partial overlay displaying program schedule information for the program currently being viewed, as shown in RDX-0968-71, it would have been obvious to a POSITA to add the functionality that Florin already disclosed for navigating through the program listings in both time and channel from Florin's "List View" overlay to this interactive display of program schedule information for the program currently being viewed, producing an interactive overlay of a single program

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listing through which the user could navigate in both time and channel.

Dr. Grimes does not testify that, under Comcast's constructions, a person of ordinary skill in the art would instantly envisage the claimed arrangement or combination after reading Florin. *See Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016) (quoting *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) for the proposition that "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."). The administrative law judge has determined that the cited testimony does not support Comcast's anticipation argument, because it does not address the proper legal standard. *Id.* Accordingly, the administrative law judge has determined that Comcast has not shown, by clear and convincing evidence, that Florin anticipates the asserted claims.

### (3) *Claims 3 and 7*

The following section addresses Comcast's anticipation arguments with respect to the limitations of claims 3 and 7.

#### (a) *Limitation 3pre*

Dr. Grimes opined that "Florin teaches an EPG for displaying program schedule information in overlaying relationship with the current broadcast program, and that information may include, but is not limited to, information for a set of other channels, and may include program information for shows scheduled to be broadcast." RX-0005C (Grimes WS) at Q/A 123.

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Dr. Delp does not explicitly agree that Florin meets this limitation, but he offers no opinion that Florin does not meet this limitation. *See generally* CX-1903C (Delp RWS) at Q/A 163-167 (for claim 3, limitation 3f is the only limitation Rovi contests).

The administrative law judge has determined that Florin discloses an electronic program guide for use with an audio-visual transceiver (54). *See id.*; *see also* RX-0215 at 8:19-48.

### (b) Limitation 3a

Dr. Grimes testified that Florin teaches the claimed memory means:

Florin discloses a memory that is used for storing this program schedule information, identified as system memory 65 as depicted in Fig. 2. Florin explains that “the volatile part of system memory 65 includes sufficient random access memory (such as RAM or DRAM) for the temporary storage of data received over the T/T cable 52” [RX-0215 at 10:15-19.] “This data stream of programs/services listing information (illustrated in FIG. 3b) is received by the transceiver’s main CPU module 62, whereafter the sections that are most relevant to the users are stored in the system memory 65.” [RX-0215 at 11:18-22.]

RX-0005C (Grimes WS) at Q/A 125; *see also* RDX-0962 (this is a helpful demonstrative that illustrates Comcast’s argument).

The administrative law judge has determined that Florin discloses DRAM memory (65) that stores programming information, per limitation 3a. *See id.*; *see also* RX-0215 at 10:15-19, 11:18-22.

### (c) Limitation 3b

Dr. Grimes testified that Florin teaches the claimed user control means:

... Florin discloses a user control means that allows the user to provide television tuning, guide channel control, and guide time control commands, in the form of a remote control 60 as shown in Figs. 5a-5b, with direction buttons and an enter button, among other inputs, and associated structures to receive and process the signals transmitted by that remote control including IR Control 82....

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RX-0005C (Grimes WS) at Q/A 127; *see also* RDX-0962.

The administrative law judge has determined that Florin discloses remote control (60) that allows a user to command the television. *See id.*; *see also* RX-0215 Figs. 5a-5b; 3:22-28; 17:32-35 (the abstract provides additional support).

*(d) Limitation 3c*

Dr. Grimes testified that Florin teaches a data processing means, CPU 63, which satisfies limitation 3c. RX-0005C (Grimes WS) at Q/A 130; *see also* RDX-0962.

The administrative law judge has determined that Florin discloses a processor that receives signals from a remote control, responds to those signals, and controls a video display generator. In particular, Florin's CPU is an equivalent structure to the "microcontroller" in the '556 patent, and the CPU performs the same functions (receiving signals in response to user control commands, responding to the user control commands, and controlling a video display generator) as the microcontroller. *See* RX-0005C (Grimes WS) at Q/A 130; RX-0215 at 5:19-22, 5:40-52, 8:53-61, 12:9-12, 17:62-66.

*(e) Limitation 3d*

Dr. Grimes testified that Florin teaches a display generator, AV encoder 78 and A/V Connect Module 66, which satisfies the video display generator (which includes RGB video generator 24 and Video Overlay Device 25) of limitation 3c. RX-0005C (Grimes WS) at Q/A 128-29; *see also* RDX-0962.

The administrative law judge has determined that Florin's AV encoder 78 and A/V Connect Module 66 collectively teach the display generator limitation. *Id.* Florin's display generator receives commands from the CPU and program schedule information from the memory means: "CPU 63 is further coupled through the system bus 64 to a memory and bus

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controller 80, which is itself coupled through an A/V decoder 74 and an A/V encoder 78 to the A/V connect module 66.” *Id.* (quoting RX-0215 at 8:42-64). Further, Florin teaches an interactive guide that allows the user to choose successive program listings that differ from a current program. *See id.* (citing RX-0215 at 16:30-38; 17:32-40, Figs. 15-16); *see also id.* at Figs. 9-11; 13:17-15:27 (“Information Function”).

### (f) *Limitation 3e*

The administrative law judge has determined that Florin’s CPU (63) controls the video display generator (AV encoder 78 and A/V Connect Module 66) so that program information is overlaid over a current program. *See* RX-0005C (Grimes WS) at Q/A 123-24, 128-30.

### (g) *Limitation 3f*

Dr. Grimes testified that the guide displays consecutive program listings in response to the remote control. *See* RX-0005C (Grimes WS) at Q/A 127 (citing RX-0215 at 3:22-28, 17:32-35).

Rovi argues that Florin does not disclose a “partially overlaid” configuration. *See* CX-1903C (Delp RWS) at Q/A 165 (limitation 3f is the only limitation Rovi contests). Dr. Delp opined that this limitation was not met because:

A person of ordinary skill in the art would recognize that “overlaid” schedule information means that the schedule information covers part of the currently appearing display signal—for example, a TV show. So Florin lacks the “data processing means” of claim element 3f because it never teaches, explicitly or inherently, overlaying currently displayed programing with program schedule information, as required by claim 3.

CX-1903C (Delp RWS) at Q/A 165.<sup>49</sup>

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<sup>49</sup> The parties agreed that “partial overlaying relationship with” should be construed as “covered-in-part or covering-in-part relationship with[.]” *See* Joint Outline (EDIS Doc. ID No. 600641,

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For limitation 3f, the administrative law judge previously determined that the prosecution history, figures, and specification all indicate that “Browse Mode” lists information corresponding to a single program at one time. *See* Section IV(A)(2)(c)(6).

Yet, the evidence that Comcast relies upon, RX-0005C (Grimes WS) at Q/A 129, indicates Florin discloses a guide with listing information for multiple programs or channels. RX-0005C (Grimes WS) at Q/A 129 (“Under Rovi’s construction of the Asserted Claims, which among other things does not limit the overlay to display of a single program listing, Florin satisfies the overlay limitations. . . . Under Comcast’s construction of the Asserted Claims, . . . [i]t would have been trivially obvious to tweak the express disclosure of Florin to provide the program listing under Comcast’s constructions.”). Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Florin teaches a guide with listing information for a single program or channel (limitation 3f).

### *(h) Limitation 3g*

For limitation 3g, the administrative law judge has determined that Florin allows a user to select a television program from the overlay guide, in accordance with Rovi’s infringement and domestic-industry allegations. For instance, CX-1594 at 1 shows a guide with multiple program listings, and Rovi relies on CX-1594 to support its domestic industry case.

Dr. Grimes testified that the remote control emits commands that allow a user to select a program using the “center select button (155).” RX-0005C (Grimes WS) at Q/A 127. The ‘556 Patent explains that:

While viewing the TV, a user may obtain additional information on a current program by depressing the info button, and obtaining more detailed information using the pointing device. By

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filed Jan. 10, 2017) at 20. The parties did not seek to have the term “overlayed” construed, and the claim language is not limited in the manner that Dr. Delp opines. *Id.* at 20-22.

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depressing the list button on the remote control device, the transceiver displays a program listing of the current programs available for viewing. Through the use of the pointing device, viewers can scroll up and down the program listing or ***view a highlighted program in full screen by pressing the select button.***

JX-0001 at 3:17-25 (emphasis added); *see also id.* at 15:28-62.

### (i) Claim 7

Comcast argues that Florin anticipates claim 7. *See* Resps. Br. at 346-47. Rovi's post-hearing brief directed to Florin does not address claim 7's validity. *See generally* Rovi Br. at (Section VIII(H)(2)); Rovi Reply at (Section IX(G)(3)).

The administrative law judge has determined that Florin anticipates claim 7 (but only if Florin anticipates claim 3). Dr. Grimes testified that schedule information displayed includes program title and program channel information. RX-0005C (Grimes WS) at Q/A 126, 129; RX-0215 at 11:8-11 ("For programming purposes, the data preferably will include titles of programs, show times, special captions, length information, categories, and key words, as well as channel numbers provided from the service provider 50 over the T/T cable 52, and received by the transceiver 54.").

### (4) Claims 15 and 18

Comcast argues:

Compared to Claim 7(3), Claim 18(15) has two minor differences. One is that the user control means must provide user-activated direction keys to control the navigation. JX-0001 at cl. 18. The remote control of Florin has an "interactive control button group [that] includes . . . a pointing device consisting of up, down, left, and right arrow buttons, and a center select button," RX-0215 at Abstract, which is used to interactively navigate through the program listings by the directional keys, as Claim 18 requires. RX-0005C at Q/A 127. The data processing means must also provide reminder selection functionality in the one mode of operation (which, under Rovi's proposed constructions, is not limited to Browse Mode), as Florin also discloses. *Id.* at 130.



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“The mark button 142 permits the user to mark programs for reminders, later recall, or switching between programs which have been selected using the mark button 142.” RX-0215 at 12:9-12. Florin depicts this in Fig. 15, which “is an additional feature of the list function of the present invention where the user marks the highlighted program with the mark button of the remote control device.” *Id.* at 5:1-3; *see* Resps.’ PreHB at 848. Florin’s “mark” feature for reminder selection and the disclosed reminder messages thus satisfies the additional limitations of Claim 18(15). *See* RX-0005C at Q/A 130.

Resps. Br. at 348-49.

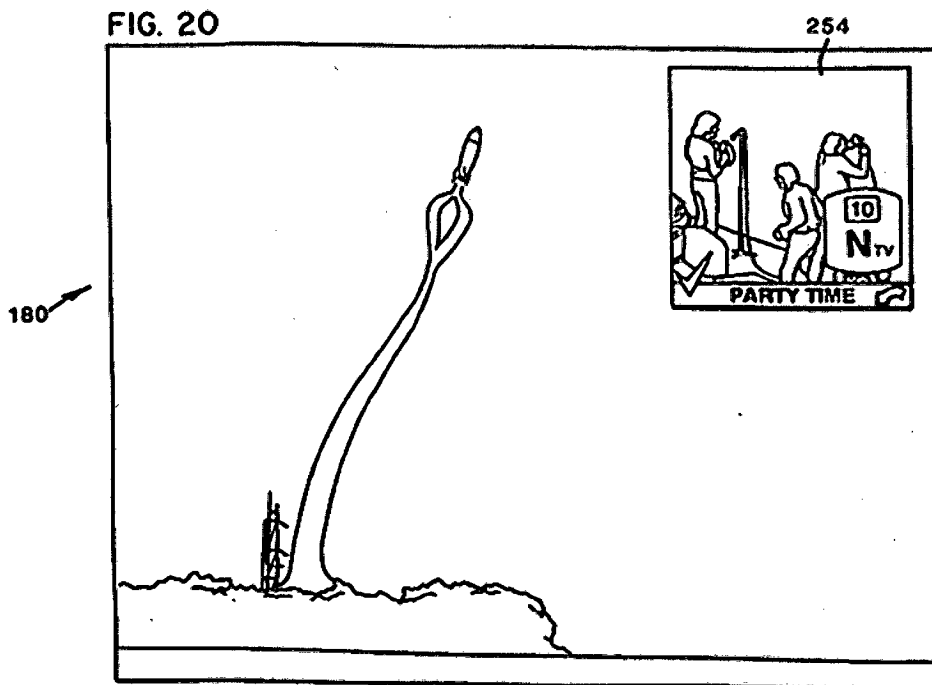
For claim 15, Dr. Delp, Rovi’s expert, opined that:

**Q166. What is the basis for your conclusion that Florin does not anticipate or render obvious claim 18(15)?**

A166. Florin does not anticipate or render obvious claim 18(15) because that claim requires navigable schedule information to be displayed “in a partial overlay on” a display signal. As I just discussed, neither the list function nor the information function disclosed by Florin provides partially overlaying a currently appearing display signal with program schedule information.

**Q167. Any other reason?**

A167. Yes, Florin does not disclose a reminder message that is displayed in overlaying relationship with another display signal being displayed or allowing a user to choose selection commands in response to the reminder selection messages, both of which are limitations in claim 15. Dr. Grimes does not offer any opinion on the subject. As shown below in figure 20, Florin discloses displaying a picture-in-picture window of a “marked” program (labeled 254), but does not disclose a reminder selection message.



JX-0008 at 1506. So Florin does not disclose, explicitly or inherently, the reminder selection elements of claim 15f.

CX-1903C (Delp RWS) at Q/A 166-67.

The administrative law judge has determined that Comcast has not shown, clearly and convincingly, that Florin discloses a guide that allows users to select a command in response to a reminder selection message in browse mode. While Florin discloses some reminder functionality, it is not clear that Florin teaches all aspects of claim 15. Accordingly, the administrative law judge has determined that Comcast has not shown that Florin anticipates claim 15.

(5) *Claim 40*

Comcast argues:

Rovi has not offered any opinion disputing that Florin anticipates Asserted Claim 40. Rovi's expert Dr. Delp did not offer any contrary opinion on Florin in his rebuttal expert report, and Dr. Delp confirmed at trial that he has offered no opinions on Florin with regard to Asserted Claim 40. Tr. 1227:2-13.

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Resps. Br. at 346. The cited portion of the transcript follows:

Q In your witness statement, you don't offer any opinions on the claim 40 of Florin, so I wanted to focus on claims 3 and 15, and particularly it's my --

A Excuse me, sir, did you say claim 40 of Florin?

Q Claim 40 of the '556 patent.

A I thought you said claim 40 of Florin.

Q I'm sorry.

A But maybe you didn't.

Q Okay. In claim 40 of the '556 patent, I don't believe you've offered any opinions with respect to Florin in your witness statement?

A I believe that's correct.

Tr. 1227.

Rovi's post-hearing brief and reply do not address claim 40, under either party's constructions. *See generally* Rovi Br. at 310-315 (Section VIII(H)(2)); Rovi Reply at 121(Section IX(G)(3)).

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Florin anticipates claim 40. The evidence and argument that Comcast presents merely states that Dr. Delp did not provide any opinion on the validity of claim 40. This is not sufficient to satisfy the clear-and-convincing standard. *Cf. Circuit Check Inc. v. QXQ Inc.*, 795 F.3d 1331, 1337 (Fed. Cir. 2015) ("Although the court acknowledged that QXQ presented no evidence that the additional limitations in those claims were present in the prior art and presented no evidence that the additional limitations were trivial, it concluded that these claims were obvious because Circuit Check, the patentee, did not explain why the additional

limitations rendered the claims non-obvious. . . . The court erred in shifting the burden of production to disprove invalidity.”).

**b) Obviousness**

*(1) Florin (RX-0215): claims 7, 18, and 40*

Comcast alleges that the asserted claims are obvious over “Florin alone.”<sup>50</sup> See Resps. Br. at 350. However, Comcast does not present a distinct obviousness argument based on Florin alone (see Resps. Br. at 350-56); rather, Comcast’s obviousness argument is blended with its anticipation argument, which is copied above. See Section IV(7)(a)(5).

For obviousness challenges based upon a single reference, the Federal Circuit has explained:

In appropriate circumstances, a single prior art reference can render a claim obvious. . . . However, there must be a showing of a suggestion or motivation to modify the teachings of that reference to the claimed invention in order to support the obviousness conclusion. . . . This suggestion or motivation may be derived from the prior art reference itself, . . . from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. See *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996); see also *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1472 (Fed. Cir. 1997) (“[T]he suggestion to combine may come from the prior art, as filtered through the knowledge of one skilled in the art.”). Determining whether there is a suggestion or motivation to modify a prior art reference is one aspect of determining the scope and content of the prior art, a fact question subsidiary to the ultimate conclusion of obviousness.

*SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000)

(citations omitted); see also *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362 (Fed. Cir. 2016)

(“our cases repeatedly warn that references to ‘common sense’—whether to supply a motivation to combine or a missing limitation—cannot be used as a wholesale substitute for reasoned

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<sup>50</sup> Florin was disclosed to the Examiner. See JX-0001 at 3.

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analysis and evidentiary support, especially when dealing with a limitation missing from the prior art references specified”); *but see Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009) (invoking “common sense” to supply a missing limitation).

The administrative law judge has determined that Comcast has not shown that a person of ordinary skill in the art would have grasped a suggestion, motivation, or perceived need to modify Florin from a guide that shows multiple listings to a guide that shows a single listing. While the difference between a guide with multiple listings and a single listing is slight, there is no explanation of why a person of ordinary skill in the art would have modified Florin in the manner Comcast suggests. *See Rovi Br.* at 315, n.65 (“This is classic hindsight reconstruction.”).

### (2) *Young ‘268 (RX-0214): claims 7 and 40*

Comcast argues that the asserted claims are obvious over Young ‘268 alone.<sup>51</sup> *Resps. Br.* at 351; RX-0005C (Grimes WS) at Q/A 138; *see also* RDX-0973 (this is a helpful demonstrative that illustrates Comcast’s argument).

Rovi argues that Young ‘268 does not teach limitation 3d. *See Rovi Br.* at 316-17 (arguing Young ‘268 does not disclose providing scheduling information that is “different from a currently tuned channel,” “does not allow the user to watch one program while navigating through other program listings,” and that Young ‘268 “does not disclose interactive functionality” (limitation 3d)).<sup>52</sup>

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<sup>51</sup> Young ‘268 was considered by the Examiner. *See* JX-0001 at 3; JX-0008 at 853-56 (Young was a primary reference in an obviousness rejection).

<sup>52</sup> CX-1903C (Delp RWS) at Q/A 171 discusses highlighting that shows missing portions of limitations 3e and 3f, but the testimony does not actually have any highlighting.

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The administrative law judge has determined that Comcast has not shown that Young '268 teaches each and every limitation of claim 3. Young '268 explains that the “grazing overlay” is directed to information for a currently selected channel:

FIGS. 9 and 10 show channel grazing overlays 64 and 66 that provide information on current programs when switching channels while watching television. In the overlay 64, when scanning channels, the title of each program is overlaid at 68, along with the name of the TV service (HBO, ABC etc.), the cable channel number, and the current date, day of week, and time in the channel information field 62. The overlay 66 is the same as the overlay 64 except that this overlay includes a program note 70, which is similar to the program note 52 in FIG. 6, but contains information pertinent to a program currently being broadcast on the selected channel.

RX-0214 at 7:58-8:2; *see also* CX-1903C (Delp RWS) at Q/A 170; RX-0005C (Grimes WS) at Q/A 146 (Young '268's “interactive functionality does not extend to browsing through program listings for other channels or future times”). Thus, Young '268 does not teach showing program information that is “different from a currently tuned channel” or allowing the user to watch one program while navigating through other program listings, as limitation 3d requires.

With regard to claim 40, Comcast has not argued that Young '268 teaches the simultaneous display of a guide and program. *See* JX-0001 at 36:45-60; CX-0004C (Delp WS) at Q/A 174 (discussing “simultaneously”). Accordingly, the administrative law judge has determined that Comcast has not clearly and convincingly shown that claim 40 is obvious.

(3) *Young '268 (RX-0214) + Reiter (RX-0188): claims 7 and 40*

Comcast's argument for this combination is:

Although producing an interactive and navigable display of program schedule information is taught by Young '268 alone, as discussed above, in the alternative, it would have been obvious to add the interactive overlay functionality from Reiter (RX-0188), which expressly discloses a user-selectable overlay of program

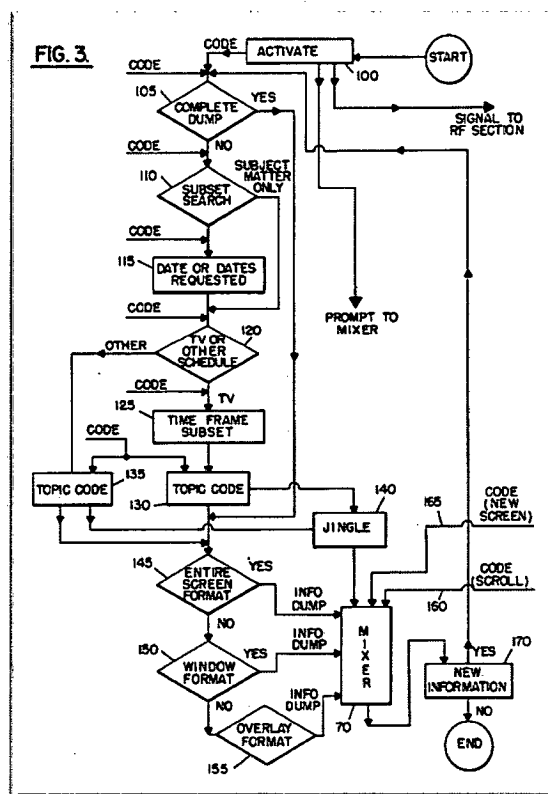
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schedule information that was navigable in both time and channel domains. *See* RX-0005C at Q/A 147 & 165-67.

Resps. Br. at 353 (footnote omitted).<sup>53</sup> The testimony Comcast that cites, Q/A 147 & 165-67, cites five lines of text (RX-0188 at 2:24-29) in response to an analogous art question and discusses Figure 3. These are the five lines of the specification:

It is a further object of the invention to provide a system which permits a television viewer to obtain, at leisure and upon command, updated television programming information and subsets thereof as an overlay or window on the display of other television signals, or as a full screen display.

RX-0188 at 2:24-29 (cited in RX-0005C (Grimes WS) at Q/A 166). This is Figure 3:



<sup>53</sup> Reiter was before the Examiner during prosecution. *See* JX-0008 at 848 (Reiter was a primary reference); *see also id.* at 689-90 (the applicant is responding to a rejection involving Reiter). The applicant argued Reiter required a “subset search” and did not allow a user “to surf in a channel and/or time domain for individual program listings . . . while continuing to watch a currently tuned program.”

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RX-0188 at 4. The discussion of Figure 3 addresses microcontroller 60 and element 155, but other elements are not assessed.

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Young ‘268 and Reiter disclose all of the elements of claim 3 or that a person of ordinary skill in the art would modify Young ‘268 in light of Reiter such that claim 3 would have been obvious. In particular, like Young ‘268, Comcast has not shown that Reiter teaches showing program information that is “different from a currently tuned channel” or allowing the user to watch one program while navigating through other program listings, as limitation 3d requires.

Additionally, Comcast’s rationale for considering “Reiter in combination with other references” is insufficient because it is generic and bears no relation to any specific combination of prior art elements. *See* RX-0005C (Grimes WS) at Q/A 166 (opining that the “motivation to combine these references [Reiter, Young ‘268, Florin, and Moro] comes from many sources, including, but not limited to, the common field and the common technical challenges confronted in designing EPGs *to meet the ‘556 Patent Asserted Claim elements’ requirements.*” (emphasis added)); *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012).<sup>54</sup> It also fails to explain why a person of ordinary skill in the art would have combined

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<sup>54</sup> In *ActiveVideo Networks*, the Federal Circuit affirmed the grant of a JMOL that reversed jury’s finding of obviousness after finding that the expert’s “testimony is generic and bears no relation to any specific combination of prior art elements. It also fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does.*” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (emphasis in original). The insufficient expert testimony was: “The motivation to combine would be because you wanted to build something better. You wanted a system that was more efficient, cheaper, or you wanted a system that had more features, makes it more attractive to your customers, because by combining these two things you could do something new that hadn’t been able to do before.” *Id.* at 1328.



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elements from specific references *in the way the claimed invention does.*” (emphasis in original)). *ActiveVideo Networks*, 694 F.3d at 1328. Further, combining references “to meet the ‘556 claim elements’ requirements” is improper hindsight. *See Cheese Systems, Purdue Pharma, and Insite Vision*.<sup>55</sup> In sum, Dr. Grimes’s testimony does not sufficiently explain why a person of ordinary skill in the art would have assembled any one, particular, discrete combination from the various permutations of asserted references (Reiter, Young ‘268, Florin, and Moro). Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that claim 7 and 40 would have been obvious based on a combination of Young ‘268 and Reiter.

(4) *Young ‘268 (RX-0214) + Young ‘121 (RX-0253) and/or Strubbe (RX-0218): claim 18*

Comcast’s argument for this combination is:

Although Young ‘268 does not, by itself, expressly disclose the reminder functionality recited by Claim 18(15), that functionality is taught by Young ‘268 through its incorporation by reference of another patent, *Young ‘121 (RX-0253), which discloses a reminder and alarm functionality controlled by a CPU and the ability to make such selections from displayed menus.* RX-0005C at Q/A 148 & 171; *see* RDX-0995 (RX-0253). *The recited reminder and reminder selection functionality is also disclosed in Strubbe (RX-0218),* which is analogous art directed to solving a related problem of simultaneously displaying textual content relating to upcoming programs along with a currently viewed program. RX-0005C at Q/A 148 & 183-84; *see* RDX-1400-02 (RX-0218). In this predictable art, it would have been *obvious to*

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<sup>55</sup> *Cheese Systems*, 725 F.3d at 1352 (“Obviousness ‘cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.’”); *Purdue Pharma*, 643 F. App’x at 963 (holding the Patent Trial and Appeal Board “improperly used hindsight by defining the problem with a recitation of the challenged claims”); *Insite Vision*, 783 F.3d 853 at 859 (“Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.”); *see also InTouch Techs.*, 751 F.3d at 1352 (faulting an expert who did “not once” analyze what one of ordinary skill in the art would have understood at the time of the invention).

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*try* to add the reminder selection messages and reminder messages of Strubbe to the system disclosed in Young ‘268. RX-0005C at Q/A 148.

Resps. Br. at 353-54 (footnote omitted, emphasis added).<sup>56</sup>

The testimony Comcast relies upon, RX-0005C (Grimes WS) at Q/A 148 & 171, does not show that Young ‘121 discloses reminder functionality. Rather, Dr. Grimes testified about reminder functionality, as follows:

**Q177. Does Young ‘121 disclose reminders and reminder selection controlled by a CPU?**

A177. Yes. Young ‘121 discloses a reminder signal shortly before broadcast, if the TV is turned off. Other reminder events are also disclosed, including a reminder calendar, which constitutes program schedule information for programs scheduled to appear on a plurality of channels. This is shown in RDX-0995.

RX-0005C (Grimes WS) at Q/A 177.

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Young ‘121 teaches claim 15’s reminder selection messages.

Young ‘121 discusses “reminders” in the “PG + Schedule Setup” section, as follows:

This mode allows the user to create a weekly reminder calendar, typically for weekly series and special events of non-weekly programs. The reminder process will set an alarm if the TV is not on before a certain time before the start of the program. If the TV is not on when the program starts, the reminder process will turn on the VCR to start recording the program.

RX-0253 at 15:18-26; *see also id.* at 8:66-9:2, 12:16-19, 20:40-64 (cited in RDX-0995). Young ‘121, including the text that Dr. Grimes cites in RDX-0995, does not disclose a data processor that displays reminder selection messages in browse mode or that the reminders are displayed in

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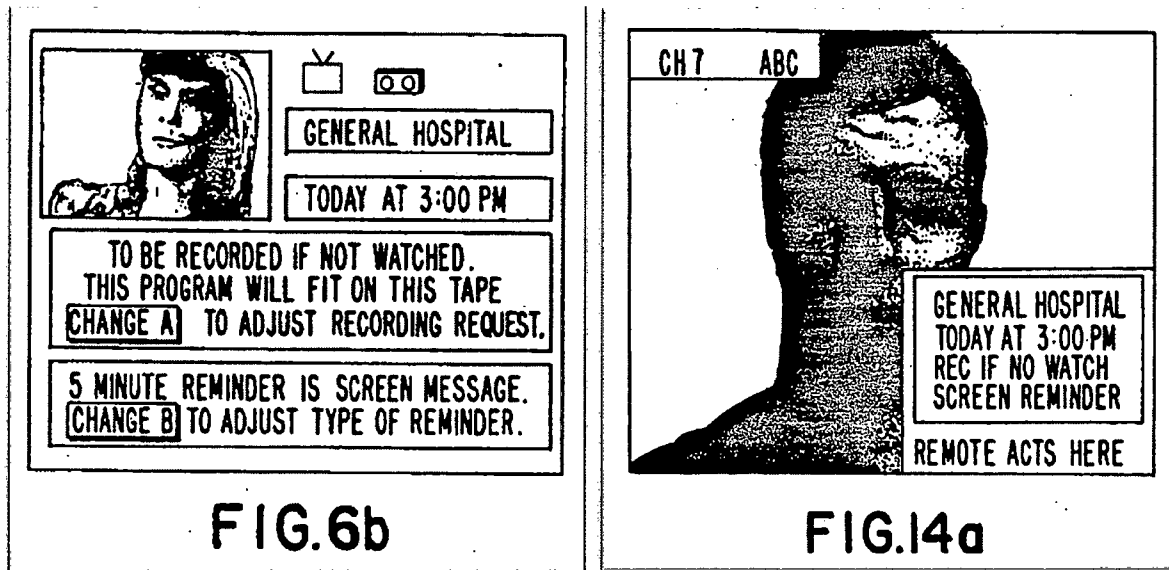
<sup>56</sup> Young ‘121 and Strubbe were disclosed to the Examiner. *See* JX-0001 at 3. The Examiner also considered Strubbe and Young. *Id.*; *see also* JX-0008C at 797 (Young ‘121 was used as a primary reference), 852 (Strubbe was used as a secondary reference).

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an overlay relationship. *See* JX-0001 at 28:17-28. Further, Young '268 is silent about reminders. *See generally* RX-0214.

Strubbe (RX-0218), however, teaches the reminder messages recited in claim 15.

Strubbe's reminder messages are shown in Figures 14a and 6b:



RX-0218 at 7, 18. The messages are in a partial overlay and allow the user to choose selection commands. RX-0005C (Grimes WS) at Q/A 148, 184.

Comcast, however, has not provided a sufficient rationale on why a person of ordinary skill in the art would combine Young '268 and Strubbe (and/or Young '121). For various permutations of obviousness combinations involving Strubbe, Dr. Grimes testified:

**Q185. Why would a POSITA have combined Strubbe with the other references?**

A185. One of ordinary skill in the art would have found the combination of Strubbe '867 and one or more of (the knowledge of one of ordinary skill in the art, Young '268, Florin, Moro) obvious at least because adding the interactively selected program schedule information and displaying claimed elements in a simultaneous relationship with a currently broadcast TV channel yields predictable results. The references and products come from the same field (EPGs), relate to a common microprocessor technology,

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and are directed at solving a common problem of displaying schedule information in an overlaying relationship. *The motivation to combine these references comes from many sources, including, but not limited to, the common field and the common technical challenges confronted in designing electronic programming guides to meet the ‘556 claim elements’ requirements.*

RX-0005C (Grimes WS) at Q/A 185 (emphasis added). At a minimum, this rationale is insufficient because it is generic and bears no relation to any specific combination of prior art elements. *See ActiveVideo Networks*.<sup>57</sup> Further, combining references “to meet the ‘556 claim elements’ requirements” is improper hindsight. *See Cheese Systems, Purdue Pharma, and Insite Vision*.<sup>58</sup> With regard to Dr. Grimes’s “obvious to try” testimony, Comcast has not shown that the obvious-to-try doctrine is applicable, because it has not identified a finite number of options, which are easily traversed, to show obviousness. *See Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc., USA*, 748 F.3d 1354, 1360 (Fed. Cir. 2014). In this regard, the Federal Circuit has explained:

In *KSR* . . . the Court explained that “obvious to try” may apply when “there are a finite number of identified, predictable solutions” to a known problem. The Court explained that when the path has been identified and “leads to the anticipated success, it is

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<sup>57</sup> In *ActiveVideo Networks*, the Federal Circuit affirmed the grant of a JMOL that reversed jury’s finding of obviousness after finding that the expert’s “testimony is generic and bears no relation to any specific combination of prior art elements. It also fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does.*” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (emphasis in original).

<sup>58</sup> *Cheese Systems*, 725 F.3d at 1352 (“Obviousness ‘cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.’”); *Purdue Pharma*, 643 F. App’x at 963 (holding the Patent Trial and Appeal Board “improperly used hindsight by defining the problem with a recitation of the challenged claims”); *Insite Vision*, 783 F.3d 853 at 859 (“Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.”); *see also InTouch Techs.*, 751 F.3d at 1352 (faulting an expert who did “not once” analyze what one of ordinary skill in the art would have understood at the time of the invention).

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likely the product not of innovation but of ordinary skill and common sense.” *Id.* This court has elaborated that the identified path must “present a finite (and small in the context of the art) number of options easily traversed to show obviousness.” *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008). As illustrated in *In re O’Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988), it would not be “obvious to try” when “the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.”

*Id.*

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that claim 18 would have been obvious based on a combination of Young ‘268 and Young ‘121 and/or Strubbe.

(5) *Young ‘268 (RX-0214) + Reiter (RX-0188) + Young ‘121 (RX-0253) and/or Strubbe (RX-0218): claim 18*<sup>59</sup>

Comcast has not briefed this particular combination of prior art references. *See* Resps. Br. at 350-54 (Section XI(H)(3)(a)).<sup>60</sup> Further, Comcast’s expert has not opined on this particular combination of references, including whether or how one of ordinary skill in the art would combine these references. *See SIBIA Neurosciences*, 225 F.3d at 1356; *Arendi S.A.R.L.*, 832 F.3d 1355 at 1362. Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that claim 18 is obvious based on the combination of Young ‘268, Reiter, Young ‘121, and/or Strubbe.

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<sup>59</sup> To the extent the issue presented in the Joint Outline differs as to the claims challenged, the administrative law judge has relied on the table in Comcast’s brief. *See* Resps. Br. at 350-51.

<sup>60</sup> Comcast asserts this combination in the table appearing on pages 350-51 of its brief.

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(6) *Moro (RX-0216) + Young '268 (RX-0214) and/or Reiter (RX-0188): claims 7 and 40*

Comcast argues that Moro teaches an apparatus with all of the claimed structures (*i.e.*, limitations 3a-3d) that supports an EPG (*e.g.*, limitation 3pre). *See* Resps. Br. at 354-55 (citing RX-0005C (Grimes WS) at Q/A 152-54, RDX-0983 (this is a helpful demonstrative that illustrates Comcast's argument)).<sup>61</sup> Comcast then argues that whatever residual "display" functionality Moro is missing would have been obvious:

In addition, as discussed in relation to the guide time control commands, Moro does not expressly disclose functionality regarding display of program content in other times. [See RX-0005C (Grimes WS) at Q/A 161.] However, as also discussed above, it would have been obvious to a POSITA to add that functionality, as disclosed in Young '268, to the disclosure of Moro, to achieve the functionality of navigating through additional timeslots and changing the on-screen display accordingly. *Id.* It would also have been obvious to a POSITA to produce that functionality by combining Reiter with Moro, for the same reasons that one would combine it with Young '268, as discussed above. *Id.*

Resps. Br. at 355-56.<sup>62</sup>

Rovi argues that Moro "does not disclose every element of any asserted claim of the '556 Patent." Rovi Br. at 317. Rovi's expert opined that "Moro does not teach, explicitly or inherently," limitations 3c, 3d, 3e, and 3f. *See* CX-1903C (Delp RWS) at Q/A 178-79. Dr. Delp's analysis largely focuses on whether Moro teaches a system where a user can navigate through program listings that includes time information. *Id.* (discussing a "time domain" and the "time-control commands" of claim 3); *see also* RX-0216 at Fig. 2 (time information is not explicitly shown).

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<sup>61</sup> Moro (EP0444496) was not before the Examiner. *See generally* JX-0001.

<sup>62</sup> Neither Comcast's brief nor Dr. Grimes's witness statement explains how Young '268 is a secondary reference. *See* RX-00005C at i, Q/A 151-62.

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Comcast does not provide a reply on Moro. *See generally* Resps. Reply, Section IX.

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that claims 7 and 40 are obvious over Moro in view of Young ‘268 and/or Reiter. As Dr. Grimes testified, Moro “does not explicitly disclose guide time control commands.” *See* RX-0005C (Grimes WS) at Q/A 156; *see also* CX-1903C (Delp RWS) at Q/A 178. Further, Comcast has not shown, through clear and convincing evidence, that Moro teaches a browse-mode-type guide having interactive functionality. *See* RX-0005C (Grimes WS) at Q/A at 161-62 (replying that Moro does “not expressly” teach reminder selections, reminder messages, or “functionality regarding display of program content in other times”); (CX-1903C (Delp RWS) at Q/A 177 (“Moro provides no disclosure of any such navigability.”). On the whole, the numerous instances where Dr. Grimes testifies that Moro “does not expressly disclose” an element—Q/A 156, 161, 162—weighs against finding the asserted claims are invalid, through clear and convincing evidence, over combinations involving Moro as a primary reference.

Moreover, Comcast and Dr. Grimes have not provided sufficient rationale for why a person of ordinary skill in the art would combine Moro with Young ‘268 and/or Reiter. Dr. Grimes testified:

**Q157. Why would it have been obvious to a POSITA to combine Moro with Young ‘268?**

[A157.] It would have been obvious to a POSITA to combine Young ‘268 with Moro at least because adding the disclosed guide-channel control commands to the system disclosed in Moro, yields predictable results. The references and products come from the same field (electronic programming guides), relate to a common microprocessor technology and are directed at solving a common problem of controlling displayed schedule information and tuning. *The motivation to combine these references comes from many sources, including, but not limited to, the common field and the*

*common technical challenges confronted in designing EPGs to meet this claim element's requirements.* A POSITA would have understood the benefits of providing alternative EPG control located at the users location to establish interactively selected program schedule information, displaying claimed elements' guide-channel control commands. As a result, one of ordinary skill in the art would have been motivated to make this combination because it provides, for example, these potential benefits associated with the ability to provide both EPG controls at the user's location. In addition, because the remote control disclosed in Young '268 contains directional arrows, the additional limitation recited by Asserted Claim 18 would also be obvious over Moro from the addition of Young '268.

RX-0005C (Grimes WS) at Q/A 157 (emphasis added). Combining references "to meet this claim element's requirements" is improper hindsight. See *Cheese Systems*, *Purdue Pharma*, and *Insite Vision*.<sup>63</sup>

(7) Moro (RX-0216) + Young '268 (RX-0214) and/or Reiter (RX-0188) + Strubbe (RX-0218): claim 18<sup>64</sup>

For claims 15 and 18, Comcast's argument is:

Although Moro does not expressly include display of reminder selection and reminder messages as recited in Claim 18(15), it teaches setting stored "reminders" in the memory of the microcomputer. RX-0005C at Q/A 161. These stored reminders act to control the tuner to automatically tune to desired program content that will air in the future based to the stored keyword, and can display an on-screen indication of a broadcast program whose reception the user had indicated was desired, which is a reminder that the program content corresponding to that selected by the user

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<sup>63</sup> *Cheese Systems*, 725 F.3d at 1352 ("Obviousness 'cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.'"); *Purdue Pharma*, 643 F. App'x at 963 (holding the Patent Trial and Appeal Board "improperly used hindsight by defining the problem with a recitation of the challenged claims"); *Insite Vision*, 783 F.3d 853 at 859 ("Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness."); see also *InTouch Techs.*, 751 F.3d at 1352 (faulting an expert who did "not once" analyze what one of ordinary skill in the art would have understood at the time of the invention).

<sup>64</sup> To the extent the issue presented in the Joint Outline differs as to the claims challenged, the administrative law judge has relied on the table in Comcast's brief. See Resps. Br. at 350-51.



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by inputting the appropriate keyword is presently airing. *Id.*; see RX-0216 at p. 5, lns. 54-58. To the extent not expressly disclosed by or obvious to a POSITA in view of the foregoing disclosure of Moro, the recited reminder functionality was well known, as evidenced in other references such as Young ‘121 and Strubbe. RX-0005C (Grimes WS) at Q/A 161. For, for the same reasons discussed above with regard to Young ‘268, it would have been ***obvious to a POSITA to at least try to*** add the reminder functionality disclosed in Strubbe to the system disclosed in Moro to provide the recited overlaid reminder selection and reminder messages. *Id.*

Resps. Br. at 355 (emphasis added).

The administrative law judge previously determined that Strubbe teaches the reminder messages from claim 15. *See* Section IV(A)(7)(b)(4). However, the administrative law judge also determined that Comcast did not provide a sufficient rationale on why a person of ordinary skill in the art would combine Young ‘268 and Strubbe (and/or Young ‘121) or that the obvious-to-try doctrine is applicable, and that reasoning applies to this combination too. Thus, Comcast has not shown that claims 15 and 18 are obvious.

### (8) *Secondary Considerations*

Rovi argues that “secondary considerations support the non-obviousness of the ‘556 Patent.” Rovi Br. at 321-22. For the following secondary considerations, Rovi argues:

- ***Copying:*** that “StarSight Telecast, EchoStar, and General Instrument” copied the claimed inventions;
- ***Long-Felt Need:*** the inventions satisfied a long-felt need for consumers wanting “to learn what programming was available while continuing to watch whatever show he or she was watching;”
- ***Industry Acclaim / Recognition by Others:*** the claimed inventions “received considerable praise, were considered highly desirable by consumers, and used extensively;”
- ***Skepticism by Others:*** the inventions succeeded despite skepticism;

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- **Commercial Success:** the inventions were and are a commercial success, and that “there is a nexus between the claimed inventions and the commercial success;”
- **Licensing Success:** a number of third parties have licensed the patent and that “there is a nexus between the inventions claimed in the ‘556 Patent and Rovi’s licensing success.”

*Id.* (citing CX-1904C (Williams RWS) at Q/A 78-89, 97, 101; CX-1903C (Delp RWS) at Q/A 214-20; CX-1905C (Putnam RWS) at Q/A 193-226). As discussed below, the administrative law judge finds that the secondary considerations are of negligible probative value.

Additionally, under the heading “There is Undisputed Objective Evidence of Obviousness,” Comcast argues:

- **Contemporaneous Invention by Others:** there was contemporaneous conception by Apple (Florin), StarSight (Young et al.), and Prevue (Prevue Express Guide in the Full Service Network);
- “the claimed invention as recited in the Asserted Claims does not address any recognized problem beyond that already addressed by numerous other references and systems[;]” and
- **Failure by Others:** “Rovi’s deployment of its IPG products in the market does not show that others had failed to conceive of and commercialize the alleged invention claimed in the ‘556 patent . . . The guides independently commercialized by StarSight and Prevue, not only rebuts alleged failure by others, but demonstrates actual success.” (underlining in original).

Resps. Br. at 356-57 (citing RX-0005C (Grimes WS) at 134, 181, 189-97). Under the heading “There is No Relevant Objective Evidence of Non-Obviousness,” Comcast argues:

- **Nexus:** “Rovi’s proffered evidence addressing secondary considerations does not even attempt to address specifics of any of the particular patents. . . . Rovi has failed to establish the commercial success was due to ‘the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter[;]”
- **Long-Felt Need:** “Rovi identifies some survey evidence, circa 1997, about the “Browse Mode” feature of an EPG, but that cannot be a proxy for the Asserted Claims, especially when Rovi contends that Browse Mode is not required” (footnote omitted); and

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- **Industry Praise:** “‘Industry Praise’ for the alleged invention similarly lacks any nexus to the Asserted Claims because it identifies ‘Insight’ (a predecessor entity to Rovi) as the provider of the technology associated with that award, a wholly different entity and technology from the United Video Properties entity that created the ’556 patent, and because the praise for the feature of helping users ‘rapidly locating their desired program’ is unrelated to the interactive overlay of the ’556 patent.”

Resps. Br. at 357-58. These arguments and the evidence cited therein also are of negligible probative value.

### (a) *Commercial Success*

Rovi argues:

Much commercial success is attributable to the inventions claimed in the ’556 Patent. CX-1905C (Putnam RWS) at Q/A 193. Companies including Rovi, Comcast, AT&T, Verizon, and SuddenLink have commercially successful products that embody the inventions claimed in the ’556 Patent, and there is a nexus between the claimed inventions and the commercial success. *Id.* at Q/A 194-99 (discussing commercial success), 200-17 (discussing nexus).

Rovi Br. at 321-22.

Comcast argues:

Rovi has failed to establish the commercial success was due to “the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.” *SightSound Techs.*, 809 F.3d at 1319.

Resps. Br. at 357.

Rovi’s reply notes that Comcast did not offer an economics opinion in response to Rovi’s argument. Rovi Reply at 123.

“‘[W]hen a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent, it is presumed that the commercial success is due to the patented invention.’”

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*Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006) (quoting *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997)); *see also In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (“A *prima facie* case of nexus is generally made out when the patentee shows both that there is commercial success, and that the thing (product or method) that is commercially successful is the invention disclosed and claimed in the patent.”) (quoting *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988)). On the other hand, “[i]f the commercial success is due to an unclaimed feature of the device’ or ‘if the feature that creates the commercial success was known in the prior art, the success is not pertinent.” *Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1034 (Fed. Cir. 2016) (quoting *Ormco*, 463 F.3d at 1312).

For the nexus requirement, the Federal Circuit has explained that

A nexus between commercial success and the claimed features is required. . . . However, if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus. . . . The presumed nexus cannot be rebutted with mere argument; evidence must be put forth.

*Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000) (citations omitted).

The administrative law judge has determined that Rovi has not made a showing that the ‘556 Patent was commercially successful because it has not shown that any products infringe or practice the ‘556 Patent.<sup>65</sup>

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<sup>65</sup> In the alternative, if it is later found that the X1, Legacy, or domestic industry products discussed above infringe or practice the ‘556 Patent, then the evidence shows that the ‘556 Patent has had some commercial success, as the products have enjoyed financial success and the corresponding guides embodied the claimed features. *See generally* CX-0004C (Delp WS) and CX-1903C (Dr. Delp opines that various guides incorporate the patented features); CX-1905C

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(b) *Licensing Success*

Rovi argues:

Rovi has also successfully licensed the '556 Patent to a number of third parties, and there is a nexus between the inventions claimed in the '556 Patent and Rovi's licensing success. *Id.* at Q/A 218-25. Thus, there has been significant commercial success attributable to the '556 Patent, not only from the products that embody the asserted claims of the '556 Patent, but also from Rovi's success in licensing the patent. CX-1905C (Putnam RWS) at Q/A 226.

Rovi Br. at 322.

Comcast argues:

... Rovi has failed to establish the commercial success was due to “the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.” *SightSound Techs.*, 809 F.3d at 1319.

Resps. Br. at 357.

The Federal Circuit specifically requires “affirmative evidence of nexus where the evidence of commercial success presented is a license, because it is often cheaper to take licenses than to defend infringement suits.” *In re Cree, Inc.*, 818 F.3d 694, 703 (Fed. Cir. 2016) (quotations omitted). The Federal Circuit explained that

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(Putnam RWS) at Q/A 194-17 (testifying about various guides and set-top boxes, their sales, and demand for browse mode). The evidence that Comcast cites, RX-0005C (Grimes WS) at Q/A 189-97, contains a single question on commercial success, Q/A 190. The responsive testimony is confined to licensing and the X1 system. *See id.* at Q/A 190. However, Rovi's showing is weak, because it has not shown that its success is not due to other factors, such as advertising and marketing or “other economic and commercial factors unrelated to the quality of the patented subject matter.” *See In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (rejecting argument where patentee did not explain “that the product was purchased due to the claimed features”); *In re DBC*, 545 F.3d 1373, 1384 (Fed. Cir. 2008). In particular, Rovi has not shown that browse mode drove consumer purchasing decisions rather than other factors (such as demand for cable television itself).

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When the specific licenses are not in the record, it is difficult for the court to determine if “the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons.”

*Id.* (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1294 (Fed. Cir. 2012)).<sup>66</sup> In general, the existence of a license alone is insufficient to show that the licensed patent was a commercial success. *See Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (“Without a showing of nexus, “the mere existence of ... licenses is insufficient to overcome the conclusion of obviousness” when there is a strong *prima facie* case of obviousness.”); *see also Amazon.com, Inc. v. Personalized Media Commc’ns, LLC*, IPR2014-01530, 2016 WL 1170773, at \*17 (Mar. 24, 2016) (“Mr. Holtzman’s testimony lists patent family licenses and revenue, but does not discuss the merits of the challenged claim as they relate to any particular license for the ‘956 patent in the portfolio of licenses. . . . [this] does not establish whether a specific license (or licensing clause, etc.) for the ‘956 patent occurred because of the merits of the challenged claim, the merits of unchallenged claims, for other patented inventions, or for other economic reasons related to the whole ‘956 patent family.”).

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<sup>66</sup> In *Antor Media*, 689 F.3d at 1294, the Federal Circuit criticized evidentiary support that is similar to the present investigation:

Antor merely lists the licensees and their respective sales revenue. The licenses themselves are not even part of the record. Antor provides no evidence showing that the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons. The Board was thus correct in holding that the existence of those licenses is, on its own, insufficient to overcome the *prima facie* case of obviousness.

[ CX-0001C at Q/A  
28, 31]

] *See id.* at Q/A 35-36; CX-1905C (Putnam RWS) at Q/A 67, 69-70.<sup>67</sup> The evidence does not show, however, that these licenses are based on the merits of the patents as opposed to a business decision to avoid litigation, a prior business relationship, or other economic reason. *See In re Cree*, 818 F.3d at 703; *In re Antor Media*, 689 F.3d at 1294. [

] Accordingly, the administrative law judge has determined that Rovi has not shown that licensing of the ‘556 Patent—[ ]—has been a success.

(c) *Copying*

Copying typically arises in a secondary-considerations analysis where the accused infringer has copied the patentee’s invention. *See, e.g., DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1329 (Fed. Cir. 2009); *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004). Copying “requires the replication of a specific product.” *Iron Grip Barbell*, 392 F.3d at 1325. Copying “may be demonstrated either through internal documents . . . direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a virtually identical replica, . . . or access to, and substantial similarity to, the patented product (as opposed to the patent).” *Id.* (citations omitted); *see also Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010) (“copying requires evidence of efforts to replicate a specific product, which may be

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<sup>67</sup> It is not readily apparent whether the licenses are in the record or if Dr. Putnam read them. *See generally* CX-1905C (Putnam RWS) at Q/A 75-79.

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demonstrated through internal company documents, direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a replica, or access to the patented product combined with substantial similarity to the patented product.”).

Rovi’s evidence consists of conclusory expert testimony that cites to a declaration submitted during prosecution. *See, e.g.*, CX-1903C (Delp RWS) at Q/A 214. Dr. Delp did not testify that he personally analyzed the StarSight Telecast, EchoStar, and General Instrument guides. *Id.* Further, there is no evidence of “internal company documents, direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a replica, or access to the patented product combined with substantial similarity to the patented product” that show “efforts to replicate a specific product.” *See Wyers*, 616 F.3d at 1246.

Accordingly, the administrative law judge has determined that this testimony is insufficient to find copying, and that this factor does not support non-obviousness.

### (d) Long-Felt Need

“Evidence of a long-felt but unresolved need can weigh in favor of the non-obviousness of an invention because it is reasonable to infer the need would not have persisted had the solution been obvious.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1056 (Fed. Cir. 2016); *see also Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 279 (1944) (finding long-felt need where competing batteries were available for many years but did not address recognized defects). Long-felt need “is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem.” *Texas Instruments Inc. v. U.S. Int’l Trade Comm’n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).



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Rovi's evidence consists of conclusory expert testimony that cites to a declaration submitted during prosecution. *See, e.g.*, CX-1903C (Delp RWS) at Q/A 215. Dr. Delp did not identify the date when the long-felt need first began, nor did he discuss any evidence outside of the file history (*i.e.*, Dr. Delp did not analyze the need "as of the date of an articulated identified problem and evidence of efforts to solve that problem," per *Texas Instruments*).<sup>68</sup> *Id.* Indeed, Dr. Delp's testimony simply agrees with a declaration submitted during prosecution that assumes long-felt need based upon "the widespread acceptance of the claimed Browse feature[.]" *Id.*

Accordingly, the administrative law judge has determined that this testimony is insufficient to find a long-felt need, and that this factor does not support non-obviousness.

### (e) *Industry Acclaim / Recognition by Others*

Rovi argues that the "inventions claimed in the '556 Patent received considerable praise, were considered highly desirable by consumers, and used extensively." Rovi Br. at 321 (citing CX-1903C (Delp RWS) at Q/A 216 (describing praise of claimed inventions), 217 (describing survey related to claimed inventions), 218 (describing survey related to claimed inventions), 219-20 (describing consumer review and advertisements of claimed invention)).

For industry praise, the Federal Circuit has explained:

Evidence that the industry praised a claimed invention or a product which embodies the patent claims weighs against an assertion that the same claim would have been obvious. Industry participants, especially competitors, are not likely to praise an obvious advance over the known art. Thus, if there is evidence of industry praise in the record, it weighs in favor of the nonobviousness of the claimed invention.

*WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1334 (Fed. Cir. 2016).

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<sup>68</sup> While Mr. Williams discussed the 1992, 1998, and 1999 timeframes, those discussions were not cited by Rovi, and the discussions relate to the priority dates of the patents, not the dates when the alleged need arose.

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The “Tour Guides” article (CX-0848, beginning at 109) demonstrates praise that is related to the StarSight guide. *See* CX-0848 at 114 (“‘Browsing’ is an excellent way to find out what’s on.”). It is assumed Rovi contends the praise applies to the ‘556 patent based upon its copying allegations. *See* RX-0005C (Grimes WS) at Q/A 193 (providing testimony pertaining to the nexus requirement).

For the consumer demand surveys or allegations of extensive use, Rovi has not explained how these affect the secondary considerations analysis. *See* Rovi Br. at 321 (Rovi’s argument is the “inventions claimed in the ‘556 Patent received considerable praise, were considered highly desirable by consumers, and used extensively.”); CX-1903C (Delp RWS) at Q/A 217-20. Further, the evidence cited in CX-1903C (Delp RWS) at Q/A 219-20 (*e.g.*, CDX-0207C and CDX-0208C) pertains to licensing for the ‘263 Patent and the ‘413 Patent. *See* CX-1905C (Putnam RWS) at Q/A 139.

Accordingly, the administrative law judge has determined that Rovi has not shown that this secondary consideration factor supports a non-obviousness finding.

### *(f) Skepticism by Others*

Rovi argues: the “inventions claimed in the ‘556 Patent helped the pay TV market grow and succeed even though at the time of the invention persons of ordinary skill in the art would have expressed skepticism of such solutions. CX-1904C (Williams RWS) at Q/A 101.” Rovi Br. at 321.

For skepticism by others, the Federal Circuit has explained:

Evidence of industry skepticism weighs in favor of non-obviousness. If industry participants or skilled artisans are skeptical about whether or how a problem could be solved or the workability of the claimed solution, it favors non-obviousness. Doubt or disbelief by skilled artisans regarding the likely success of a combination or solution weighs against the notion that one

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would combine elements in references to achieve the claimed invention

*WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1334 (Fed. Cir. 2016).

The testimony Rovi cites pertains to the ‘871 Patent:

**Q101: What effect, if any, did the ‘871 Patent have on the industry?**

A101: The inventions of the ‘871 Patent helped the pay TV market grow and succeed. At the time of the invention, some persons of ordinary skill in the art would have expressed skepticism of such solutions considering multiple tuner systems or a networked whole home DVR too complex, costly, and impractical. The solutions of the ‘871 Patent were copied by implementer after implementer as multi-channel digital television systems became more widespread.

CX-1904C at Q/A 101 (cited by Rovi Br. at 321). The testimony at Q/A 68 pertains to the ‘556 Patent:

**Q68: So how did you interpret all of this?**

A68: The inventions of the ‘556 Patent helped the pay TV market grow and succeed. At the time of the invention, some persons of ordinary skill in the art would have expressed skepticism that such capabilities could be brought into the television space considering the resolution requirements, processing requirements, data requirements and common experience with the way people traditionally watched TV. The solutions of the ‘556 Patent were copied by implementer after implementer as multi-channel digital television systems became more widespread.

This testimony is conclusory and does not explain who expressed skepticism that the guides claimed in the ‘556 Patent were not feasible. *See, e.g., Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1367 (Fed. Cir. 2012) (finding skepticism from “leading experts in the field and reviewers for the *Plastic and Reconstructive Surgery* journal); *Vulcan Engineering Co., Inc. v. Fata Aluminum, Inc.*, 278 F.3d 1366, 1373 (Fed. Cir. 2002) (pointing to technical articles and witness testimony).

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The administrative law judge has determined that Rovi has not shown that this factor supports a finding of non-obviousness.

### (g) *Contemporaneous Invention by Others*

Comcast argues:

The objective facts showing the obviousness of the Asserted Claims include the contemporaneous conception of the Asserted Claims by others, including Apple (Florin), StarSight (Young et al.), and Prevue (Prevue Express Guide in the Full Service Network) RX-0005C at Q/A 134, 181, 192. This repeated conception confirms the obviousness of the Asserted Claims. *See Ecolochem v. S. Cal. Edison Co.*, 227 F.3d 1361, 1379 (Fed. Cir. 2000).

Resps. Br. at 356.

“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.” *Trustees of Columbia Univ. in City of N.Y. v. Illumina, Inc.*, 620 F. App’x 916, 929 (Fed. Cir. 2015) (quoting *George M. Martin Co. v. Alliance Mach. Sys. Int’l LLC*, 618 F.3d 1294, 1305 (Fed. Cir. 2010)).

The administrative law judge has determined that Comcast’s contemporaneous inventions argument is of little weight; the evidence is rather weak because Florin and Young were before the Examiner during prosecution and the Prevue guide analysis is limited to corporate testimony instead of an examination of the guide. *See* Resps. Br. at 357, n.93.

Accordingly, this argument and the evidence cited therein also is of negligible probative value.

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### *(h) Failure of Others*

Comcast argues that “Rovi’s deployment of its IPG products in the market does not show that others had failed to conceive of and commercialize the alleged invention claimed in the ‘556 patent. RX-0005C (Grimes WS) at Q/A 192.”<sup>69</sup> Rovi does not argue failure of others.

Accordingly, this argument and the evidence cited therein is of negligible probative value.

### *(i) Weighing the Secondary Consideration Factors*

On the whole, the administrative law judge has determined that the evidence cited by Rovi is negligible in the overall obviousness analysis. Likewise, the evidence cited by Comcast is negligible in the overall obviousness analysis, and it does not cure the defects in its obviousness arguments (such as failing to identify a problem to be solved, providing sufficient motivation to combine or modify references, or addressing limitations missing from the prior art). Thus, the evidence does not have a perceptible impact on the obviousness calculus.

### *c) Non-Statutory Double Patenting*

Comcast argues:

... the Asserted Claims of the ‘556 patent are invalid as patentably indistinct from certain claims of the ‘967 (RX-0211) and ‘185 (RX-0212) Patents, which issued from continuation applications claiming ultimate priority to the ‘556 patent, and which share a common specification. RX-0005C (Grimes WS) at Q/A 105, 112, & 114-15.

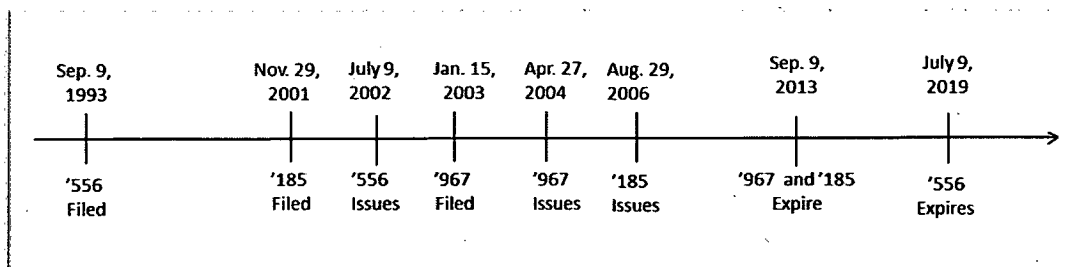
Resps. Br. at 341 (referencing U.S. Patent Nos. 6,728,967 and 7,100,185).

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<sup>69</sup> Dr. Grimes opined: “It is my opinion that Rovi’s deployment of its IPG products in the market does not show that others had failed to conceive of and commercialize the alleged invention claimed in the ‘556 Patent. . . . Not only does this rebut any assertions that others had failed to commercialize the claimed invention and/or conceive of it, but the contemporaneous conception and development confirms that the alleged invention of the ‘556 Patent was obvious. . . .”

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Rovi argues that the '556 Patent, which was filed before the Uruguay Round Agreements Act ("URAA") was effective, is not an improper extension of the '967 or '185 Patents, which were filed after the URAA was effective. Rovi Br. at 322-23. Rovi's brief provides the following timeline:



*Id.* at 322. Rovi adds:

As shown above, the '556 Patent, although filed earlier, expires later than the '967 and '185 Patents. This situation results from a change in the law governing patent terms and a delay in prosecution of the '556 Patent through no fault of the inventors. Specifically, the '556 Patent was filed prior to enactment of the URAA. Under the law, patents filed prior to the URAA are entitled to a term that is the greater seventeen years post-grant or twenty years post filing. 35 U.S.C. § 154(c)(1). In contrast, the '185 and '967 Patents were filed after the enactment of the URAA. Patents filed after enactment of the URAA only carry terms of twenty years post-filing. 35 U.S.C. § 154(a)(2). As discussed in detail in section H(2)(a) above, during prosecution of the application for the '556 Patent, the Patent Office requested an "interference" proceeding between the applicant and a third party claiming to have earlier invented the subject matter of the application. The interference proceeding was resolved and the '556 Patent issued—over eight years after filing. These events, combined, resulted in the '967 and '185 patents expiring in September 2013, and the '556 Patent expiring in July 2019.

*Id.* at 323. Rovi then argues that obviousness-type double patenting does not apply on these facts. *Id.* Rovi further argues that Comcast has failed to identify a motivation to modify the allegedly invalidating claims to cover the asserted claims and that the asserted claims are patentably distinct from the allegedly invalidating claims. *See* Rovi Br. at 327-29.

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Comcast replies that Rovi ignored the ‘556 Patent’s means-plus-function limitations and that the memory from allegedly invalidating claim 19 is “inherently” disclosed. *See* Resps. Reply at 131-32.

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims are invalid for obviousness-type double patenting in light of the ‘967 and ‘185 Patents.

As an initial matter, the cases that Rovi cites in support of its argument that a post-URAA patent cannot invalidate a pre-URAA patent, *Brigham & Women’s Hosp. Inc. v. Teva Pharm. USA, Inc.*, 761 F. Supp. 2d 210, 225 (D. Del. 2011) and *Abbott Labs. v. Lupin Ltd.*, No. 09-152-LPS, 2011 WL 1897322, at \*10 (2011 U.S. Dist. LEXIS 53846) (D. Del. May 19, 2011), have not gained traction in subsequent decisions. *See Gilead Scis., Inc. v. Natco Pharma Ltd.*, 753 F.3d 1208, 1215 (Fed. Cir. 2014) (directing courts to look at a patent’s expiration date, not its filing date, in obviousness-type double patenting challenges); *see also Janssen Biotech, Inc. v. Celltrion Healthcare Co.*, 210 F. Supp. 3d 278, 2016 WL 5698362 at \*3 (D. Mass. 2016) (critiquing plaintiff’s reliance on *Brigham* and *Abbot*); *DDB Techs., L.L.C. v. Fox Sports Interactive Media, LLC*, No. A-11-CV-929-LY, 2014 WL 12167628, at \*4 (W.D. Tex. May 15, 2014) (same).

The Federal Circuit has explained that obviousness-type double patenting analysis involves two steps:

First, the court construes the claims in the earlier patent and the claims in the later patent and determines the differences. Second, the court determines whether those differences render the claims patentably distinct. . . . A later claim that is not patentably distinct from, *i.e.*, is obvious over or anticipated by, an earlier claim is invalid for obviousness-type double patenting.”

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*Abbvie Inc. v. Mathilda & Terence Kennedy Inst. of Rheumatology Trust*, 764 F.3d 1366, 1374 (Fed. Cir. 2014).<sup>70</sup>

Comcast argues claims 7 and 40 are patentably indistinct from claims 11-12 and 14-16 from the ‘185 Patent and claims 26-27 & 35-36 of the ‘967 Patent. *See* Resps. Br. at 344; RX-0005C (Grimes WS) at Q/A 105, 114. Comcast also argues that claim 18(15) is patentably indistinct from claims 17-20 from the ‘185 Patent and 24 and 33 from the ‘967 Patent. *Id.* However, neither Comcast nor Dr. Grimes offer claim constructions for any of the allegedly invalidating claims. *See generally id.* For example, in RDX-0952, Comcast compares the ‘556 Patent’s “display generator” to the ‘185 Patent’s “means for displaying” and the ‘967 Patent’s “display device” without offering any constructions. Likewise, Comcast compares the ‘556 Patent’s “memory means” to the ‘185 Patent’s “program listings” and the ‘967 Patent’s “program listings information” without offering any constructions. Comcast has failed to meet its burden under the first step of the Federal Circuit’s obviousness-type double patenting law.

Additionally, Comcast does not substantively compare the allegedly invalidating claims to the asserted claims in its brief, and Dr. Grimes does not substantively compare the allegedly invalidating claims to the asserted claims in his witness statement. *See generally* Resps. Br., RX-0005C (Grimes WS).<sup>71</sup> Thus, there is no discussion of the differences between the allegedly invalidating claims and the asserted claims. *Id.*; *see Abbvie*, 764 F.3d at 1374 (“the court

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<sup>70</sup> Citations to *Sun Pharm. Indus., Ltd. v. Eli Lilly & Co.*, 611 F.3d 1381, 1385 (Fed. Cir. 2010), *Pfizer, Inc. v. Teva Pharm. USA, Inc.*, 518 F.3d 1353, 1363 (Fed. Cir. 2008), and *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001) omitted; quotations and bracketing alterations are also omitted.

<sup>71</sup> Rather, Comcast’s analysis is relegated to demonstratives. *See* RX-0005C (Grimes WS) at Q/A 116-18 (citing RDX-0952-59).



determines whether those differences render the claims patentably distinct”).<sup>72</sup> Comcast has not persuasively shown that the ‘185 Patent’s or the ‘967 Patent’s allegedly invalidating claims cover data processing means that display program schedule information in portions where “each said portion comprising listing information for each successive one of said television programs scheduled to appear on said set of channels and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means” (limitation 3f) or that the data processing means is “responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlaid portion of said schedule information” (limitation 3g).

*d) Indefiniteness*

Comcast argues, for the “data processing” means in claims 3, 15, and 40, that:

... each of these terms is indefinite because the written description fails to provide the requisite structure; the only disclosed structure is a general purpose processor, and no code or algorithms are disclosed. In view of this intrinsic evidence, a POSITA would have interpreted these terms as lacking requisite structure, consistent with Comcast’s proposal. RX-0005C (Grimes WS) at Q/A 50; RX-0848C at Q/A 91. In fact, the ‘556 patent expressly concedes that it fails to disclose code or algorithms to **implement** the recited functions on the disclosed general purpose processor.

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<sup>72</sup> There also is no discussion of why a person of ordinary skill in the art would modify the newer claims in a manner that would render the prior claims obvious. *Cf. Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1298 (Fed. Cir. 2012) (“In the context of claimed chemical compounds, an analysis of nonstatutory obviousness-type double patenting—like an analysis under § 103—entails determining, *inter alia*, whether one of ordinary skill in the art would have had reason or motivation to modify the earlier claimed compound to make the compound of the asserted claim with a reasonable expectation of success. There is no other way to consider the obviousness of compound B over compound A without considering whether one of ordinary skill would have had reason to modify A to make B. That is traditional obviousness analysis.”).

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*Id.* Rovi's Dr. Delp has not identified any code or algorithms either. . . .

Resps. Br. at 297-99 (emphasis in original).

Rovi argues that the '556 Patent discloses algorithms for performing the claimed functions. *See* Rovi Br. at 272 (citing CX-1903C (Delp RWS) at Q/A 60; Figure 36A; col. 8, lns. 3-37, col. 8, lns. 49-67, col. 10, lns. 23-34, col. 10, ln. 66 - col. 11, ln. 15, and col. 12, ln. 49 - col. 13, ln. 4, and col. 22, ln. 63).

Comcast does not present a reply. *See generally* Resps. Reply at 129-32.

The Federal Circuit has explained that the "amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention." *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385 (Fed. Cir. 2011). Dr. Grimes—Comcast's expert—testified that using a data processor for an EPG was known and implemented well before the '556 Patent. *See* RX-0005C (Grimes WS) at Q/A 58 ("this functionality was taught by Reiter, as shown in RDX-0988-89, no later than 1985 through the use of a processor to allow a user to select a particular display of a chosen subset of the stored program schedule information from among a full screen display, a windowed format, and an overlay format and navigate through the information"). Dr. Grimes also testified that a data processor or microcontroller "have long been known and used, including to implement the functionality selected by a television viewer on a remote control" and that using "a processor to control the output of a video display generator for display, in response to user control commands and other user selections, was well known and implemented in the art for years, if not decades, before the '556 Patent." *Id.* at Q/A 59-60. For claim 18, Dr. Grimes opined that the "structures and techniques recited in Claim 18(15) are conventional components recited in the other Asserted Claims that merely implement well-

understood activity.” *Id.* at Q/A 61. Given this testimony, the administrative law judge finds that Comcast has not shown that a person of ordinary skill in the art would have considered the “data processor” limitation indefinite under § 112.

**B. U.S. Patent No. 8,006,263**

**1. Overview of the ‘263 Patent (JX-0002)**

The ‘263 Patent, entitled “Interactive television program guide with remote access,” issued on August, 23, 2011. The ‘263 Patent is a continuation of two patent applications, and it claims the benefit of U.S. Provisional Application No. 60/097,527, filed August 21, 1998, and U.S. Provisional Application No. 60/093,292, filed July 17, 1998. The ‘263 Patent shares “essentially the same specification” as the ‘801 Patent and the ‘413 Patent. *See* Resps. Br. at 63; *see also* Rovi Br. at 41 (explaining the patents “stem from a common, parent application filed on July 16, 1999”). The ‘263 Patent relates to interactive television guide programs that operate on local devices, such as a set-top box, and remote devices, such as a laptop or mobile phone.

Comcast has collectively introduced the ‘263, ‘801, and ‘413 Patents as the “Remote Access Patents.” *See, e.g.,* Resps. Br. at 63; *see also* Tr. 37 (“smartphone scheduling of DVR recordings.”).

**2. Claim Construction**

**a) Level of Ordinary Skill in the Art**

The parties address the level of ordinary skill for the ‘263, ‘801, and ‘413 Patents together. *See* Rovi Br. at 42; Resps. Br. at 70.

Rovi argues:

One of ordinary skill in the art would have a bachelor’s degree in electrical or computer engineering or computer science, or equivalent experience, and two to four years of experience relating

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to computer programming and UI. CX-0002C (Shamos WS) at Q/A 93-95.

Rovi Br. at 42.

Comcast argues:

A POSTIA of the '263, '413, and '801 patents as of July 16, 1999, Rovi's proposed date of invention, would have a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline, and at least two years of experience or familiarity with computer networks, graphical user interfaces, and the associated computer software. RX-0850C (Wigdor RWS) at Q/A 6. In the alternative, a POSITA could have equivalent experience either in industry or research, such as designing, developing, evaluating, testing, or implementing the previously mentioned technologies. *Id.* There is not a meaningful dispute between the parties on this issue. *Id.* at Q/A 8.

Resps. Br. at 70.

In view of the expert testimony and consensus between the parties, the administrative law judge has determined that a person having ordinary skill in the relevant art would have a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline and two to four years of experience or familiarity with computer networks, graphical user interfaces, and the associated computer software.

### *b) Agreed Claim Terms*

The parties have submitted agreed constructions for multiple claim terms, as follows:

Claim Term	Agreed Construction
1. Local Guide	local interactive television program guide
2. Preamble (system for selecting television programs over a remote access link comprising an Internet communications path for recording)	The preamble is limiting.

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<b>Claim Term</b>	<b>Agreed Construction</b>
3. Receiving, with the remote access interactive television program guide, a selection of a program listing the plurality of program listings in the display	receiving; with the remote access interactive television program guide, a selection of a program listing of the plurality of program listings in the display
4. Interactive television program guide equipment	equipment on which an interactive television program guide is implemented
5. Local interactive television program guide equipment	equipment on which a local interactive television program guide is implemented
6. Location remote from the mobile device/remote program guide access device	location other than on the mobile device/remote program guide access device
7. Program listing	information sufficient to identify a television program for recording
8. Remote access link comprising an Internet communications path	a communications path including at least the Internet
9. User profile	user specific data at least defining preferences
10. Remote device	remote interactive television program guide access device
11. Remote guide	remote access interactive television program guide
12. Remote to the remote device	not on the remote device
13. Television equipment	user television equipment
14. User equipment	user television equipment
15. User site	location of the user equipment

See Joint Outline at 4.<sup>73</sup>

*c) Disputed Claim Terms*

*(1) Interactive television program guide*

Rovi argues:

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<sup>73</sup> EDIS Doc. ID No. 600641, filed Jan. 10, 2017.

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This term does not require separate construction, as the phrase “interactive television program guide” does not appear separately from the broader phrases “local interactive television program guide” and “remote access interactive television program guide,” each of which are separately proposed for construction as discussed herein. Wigdor Tr. 897 (Respondents’ expert testifying that the term “interactive television program guide” does not appear in any claim, apart from the broader phrases). CX-0002C (Shamos WS) at Q/A 143 (Rovi’s expert explaining that no separate construction of this term is required). Further, many of Respondents’ constructions for other terms contain “interactive television program guide” as part of the proposal and it is properly construed as part of each individual term.

Rovi Br. at 42.

Comcast argues:

The proposed constructions for “interactive television program guide,” “local interactive television program guide,” “remote interactive television program guide,” “remote interactive television program guide access device,” and “remote program guide access device” are all related and will be discussed together. See RDX-0834 to RDX-0836 (listing both party’s *[sic]* constructions).

Resps. Br. at 70-71.<sup>74</sup>

The administrative law judge agrees with Rovi that this term does not require separate construction. Indeed, this term does not appear separately from other terms that include it, and need not be construed in isolation.

### (2) *Local interactive television program guide*

The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
guide that allows navigation through	interactive television program guide

<sup>74</sup> Comcast points to many demonstrative exhibits to present its claim constructions (here, RDX-0834 to RDX-0836). It is unclear why Comcast would refer to a demonstrative image rather than directly state and argue a proposed claim construction in its brief. See Pre-Hr’g Tr. 14.

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<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
television program listings and causes display of program information on user television equipment	inside a user's home

See Rovi Br. at 43; Resps. Br. at 70-71.<sup>75</sup>

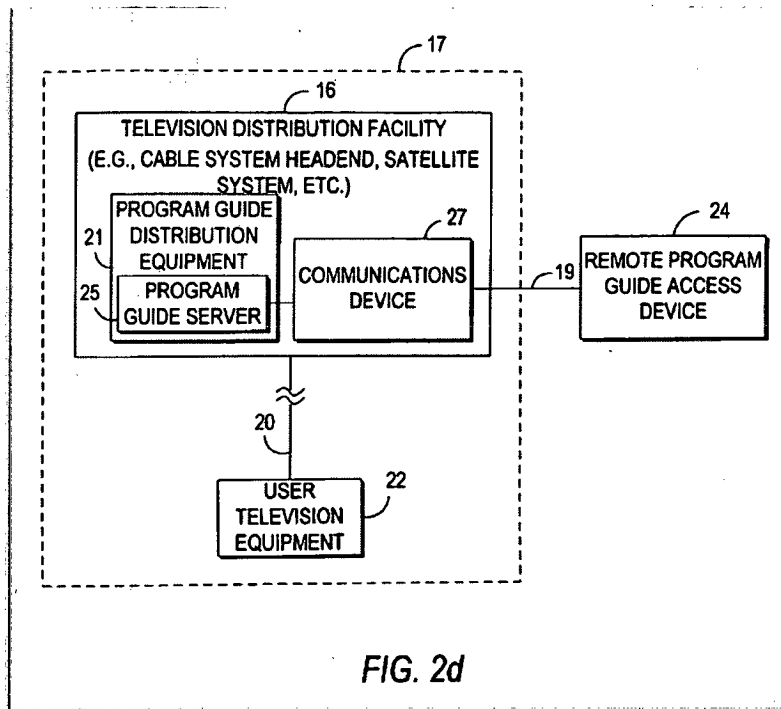
Rovi argues:

The majority of the claim construction issues—and the related infringement disputes—distill to whether the adjective “local” requires that all portions of the interactive program guide must exist and execute entirely, solely, and only inside a user’s home or whether portions of the guide may (as the Patents contemplate) exist outside the user’s home. Wigdor Tr. 893 (Respondents’ expert confirming that, as applied in his non-infringement opinions, the “application” corresponding to the “local interactive television program guide” must “execute” solely, entirely, and only on television equipment inside the user’s home). There is no intrinsic justification for limiting this term as Respondents suggest.

Rovi Br. at 43. Rovi generally relies on the text of the specification (JX-0002 ('263 Patent) at col. 4, ll. 33-36, col. 6, ll. 61-64, col. 12, ll. 25-29, col. 14, ll. 11-18, col. 20, ll. 27-29, col. 4, ll. 11-14, and Figures 12-23), Figures 2a-2d, and Dr. Shamos’s (Rovi’s expert) and Dr. Wigdor’s (Comcast’s expert) testimony. See Rovi Br. at 43-46. In particular, Rovi relies upon Figure 2d, which is reproduced below:

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<sup>75</sup> Comcast’s post-hearing brief explains that “Comcast proposes that ‘local interactive television program guide’ be construed as ‘interactive television program guide inside a user’s home’ and ‘remote access interactive television program guide’ be construed as ‘interactive television program guide outside a user’s home.’” Resps. Br. at 71.



See Rovi Br. at 44; JX-0002 at 15.<sup>76</sup> With regard to Figure 2d, Rovi notes that:

as shown in the embodiment of Fig. 2(d), and contrary to Respondents' proposed construction, *the "interactive television program guide equipment 17" on which the "local interactive television program guide" "is implemented" includes the television distribution facility 16 and program guide distribution equipment 21—which are demonstrably located outside of the user's home—as well as the user television equipment 22. See e.g., JX-0002 ('263 Patent) at Fig. 2(d); col. 4, lns. 56-61 ("As shown in FIGS. 2a-2d interactive television program guide equipment may include program guide distribution equipment 21 located at television distribution facility 16 and user television equipment 22").*

Rovi Br. at 44 (additional emphasis added). Rovi further argues that the patentee defined the term "local" in the specification:

Exercising lexicography, the Patents define the term "local interactive television program guide" as another name for "the

<sup>76</sup> Figure 3 provides additional context for understanding the "User Television Equipment" (22) that is shown in Figure 2d. In particular, Figure 3 shows that "user television equipment" can include a television (36), a set-top box (28), and a remote control (40).



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interactive television program guide that is implemented, on interactive television program guide equipment 17.” JX-0002 (‘263 Patent) at col. 12, lns. 25-29. *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014).

*Id.* (footnote omitted).

Comcast argues that “‘local’ means ‘inside a user’s home’ and ‘remote access’ means ‘outside a user’s home.’” *See* Resps. Br. at 71 (quoting RX-0007C (Wigdor WS) at Q/A 122-123). In critiquing Rovi’s proposed construction, Comcast relies upon expert testimony, the prosecution history, the specification, inventor testimony, and attorney argument. *See* Resps. Br. at 74-78. With regard to the prosecution history, Comcast argues:

The file histories also make clear that “local” refers to the location of the user equipment, not a central location such as a cable headend. As noted above, in responding to a rejection based on Blake, the applicants argued that the claims were different from Blake’s disclosure of a central processing system that was separate and apart from the equipment within a user’s home. *See* § VIII.A.4. The applicants argued their invention allowed that “the user may select a program for recording over a remote access link by a *local interactive television program guide implemented on user television program guide equipment.*” JX-0009 (‘263 file history) at .684-694 (emphasis added). The applicants also distinguished between the “central processing system” of Blake and “local recording equipment” located at the user site. *Id.* at .729. Finally, the applicants repeatedly argued that Blake did not feature recording by a “local” program guide because the equipment that receives the message from the remote guide was a “central processing system” and thus not “local.” *Id.* at .729; JX-0010 (‘801 file history) at .374-384, 557-576, 8758-77.

*Id.* at 76-77.

Rovi presents no argument about this limitation in its reply. *See generally* Rovi Reply, Section VI(D). Comcast’s reply essentially reargues its post-hearing brief. *See* Resps. Reply at 15-19.

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The administrative law judge construes the term “local interactive television program guide” to mean “guide that allows navigation through television program listings and causes display of program information on user television equipment.”

To begin, the claim term itself does not contain an explicit location-based limitation, as Comcast urges. The words in close proximity to the term also do not contain a location-based limitation. In contrast, “user television equipment” is “located within a user’s home,” a display device is “at the user’s home” and “a remote program guide access device [is] located outside of the user’s home[.]” JX-0002 at 28:33-39. Other independent claims contain similar distinctions. *See generally* JX-0002 at 28:7-32:38 (*e.g.*, claims 5, 8, 11, and 17). Thus, the administrative law judge finds no support in the plain claim language to require that the local interactive television program guide be solely “inside a user’s home.”

Furthermore, the specification, including the figures, supports the construction. In particular, Figure 2d depicts the “interactive television program guide equipment” (17) as including a television distribution facility (16) and user television equipment (22). The background of the ‘263 Patent also explains that “interactive electronic television program guides have been developed that allow television program information to be displayed on a user’s television.” JX-0002 at 1:27-30. The detailed description adds that a “local” guide may be implemented on “interactive television program guide equipment 17[.]” *Id.* at 12:23-37. The remaining portions of the specification that Rovi cites, in general, support the construction. Rovi Br. at 43.

With regard to Rovi’s lexicographer argument, the administrative law judge has determined that the patentee did not clearly define the disputed claim term in a way that demands

departing from a plain-and-ordinary-meaning construction. The Federal Circuit has explained that

To act as its own lexicographer, a patentee must “clearly set forth a definition of the disputed claim term” other than its plain and ordinary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must “clearly express an intent” to redefine the term. *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008); *see also Kara Tech. Inc. v. Stamps.com*, 582 F.3d 1341, 1347-48 (Fed. Cir. 2009).

*Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012); *see also GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (“To act as its own lexicographer, a patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to [re]define the term.”); *Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016) (“The standards for finding lexicography and disavowal are ‘exacting.’”). The scant passage upon which Rovi relies, JX-0002 at 12:25-29, is buried deep in the specification (after appear several times before) and does not explicitly provide a definition for “local.”<sup>77</sup> Indeed, it is plausible that the patentee used ““local”” to differentiate the “remote access” guide or simply to remind the reader that “interactive television program guide equipment 17” was the local guide. Further, the patentee did not provide a section of definitions, and it is not argued that the patentee defined any other terms in the specification.

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<sup>77</sup> JX-0002 at 12:25-29 explains, “The remote access interactive television program guide may communicate with the interactive television program guide that is implemented on interactive television program guide equipment 17, herein referred to as a “local” interactive television program guide.”

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Similarly, the prosecution history does not present a clear disavowal of claim scope, as Comcast suggests by relying on the prosecution history. *See Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1095 (Fed. Cir. 2013) (“[W]hen the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent, the doctrine of prosecution history disclaimer narrows the meaning of the claim consistent with the scope of the claim surrendered.”); *Omega Eng’g, Inc., v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003) (“for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.”); *see also Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (providing several examples of circumstances supporting disclaimer). Indeed, a review of the file history indicates that the patentee distinguished Blake at least upon its lack of a second guide that could display program listings:

Applicants’ claims, as amended, require that each program guide be configured to display program listings, which is lacking in the Blake recording equipment. Therefore, Blake does not show or suggest a remote program guide configured to display program listings, transmitting a communication to a local program guide configured to display program listings to record the program corresponding to the selected listing, as required by applicants’ claims.

JX-0009C at 729. At least this distinction undercuts Comcast’s arguments.

Additionally, the inventor testimony upon which Comcast relies, JX-0118C at 10:15-20 and 30:3-13, is extrinsic evidence. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005). Accordingly, it is afforded less significance than the intrinsic evidence discussed above. *Id.*; *see also ArcelorMittal France v. AK Steel Corp.*, 700 F.3d 1314, 1321-22 (Fed. Cir. 2012) (“an inventor’s subjective understanding of patent terminology is irrelevant to claim construction”); *Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1346

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(Fed. Cir. 2008) (“The testimony of an inventor ‘cannot be relied on to change the meaning of the claims.’”). The administrative law judge has reviewed the cited testimony and determined that it is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *See Phillips*, 415 F.3d at 1317.

Finally, the parties both rely upon expert testimony to advance their arguments. Expert testimony is one form of extrinsic evidence. Given that the parties’ experts’ testimony essentially dovetails with the parties’ arguments, the administrative law judge finds that the expert testimony is not particularly significant, vis-à-vis the intrinsic record, when “determining ‘the legally operative meaning of claim language.’” *See Phillips*, 415 F.3d at 1317.

### (3) *Remote access interactive television program guide*

The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
guide allowing navigation through television program listings using a remote access link	interactive television program guide outside a user’s home

*See* Rovi Br. at 47; Resps. Br. at 71.

Rovi argues:

As with the prior term, Respondents again try to import a geographical limitation that the “remote access interactive television program guide” be limited to a guide existing entirely “outside a user’s home.” Resps. P.H. Br. at 182-83. One of ordinary skill in the art would agree with Rovi’s proposed construction—“guide allowing navigation through television program listings using a remote access link.” CX-0002C (Shamos WS) at Q/A 106. While it is clear that “remote access interactive television program guide” must be distinguished from “local interactive television program guide,” it does not follow that the “local guide” must be confined solely to a guide existing entirely “inside the home” while the “remote guide” is confined solely to a guide existing entirely “outside the home.” As the ‘263 Patent specification explains: “The interactive television program guide

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equipment is connected to one or more remote program guide access devices over a remote access link.” JX-0002 (’263 Patent) at col. 2, lns. 37-39. Therefore, what makes a guide a “remote access interactive television program guide”—as opposed to a “local interactive television program guide”—is that the “remote access interactive television program guide” is connected to the “local interactive television program guide” via a remote access link. Indeed, this is precisely what is depicted in Fig. 2(d). JX-0002 (’263 Patent) at Fig. 2(d). This construction is also supported by the intrinsic evidence at JX-0002 (’263 Patent) at col. 2, lns. 39-56, col. 12, lns. 23-46, which discuss how the remote access link is used by the remote access interactive television program guide. CX-0002C (Shamos WS) at Q/A 106, 108, 110, 128 (explaining addition intrinsic evidence in regard to the remote access link).

Rovi Br. at 46-47.

Comcast argues:

Rovi’s constructions remove important aspects of the plain and ordinary meaning of “local” and “remote” from the claims. A POSITA would recognize that local and remote are designations of location, not designations of function. RX-0007C at Q/A 135. But Rovi’s constructions would define “local interactive television program guide” and “remote access interactive television program guide” through their functions and remove any meaning regarding location. . . .

Rovi’s constructions of “local interactive television program guide” and “remote access interactive television program guide” are also contradicted by arguments the applicants made during prosecution. In this litigation, Rovi takes the position that “what makes a guide ‘remote access is that it is connected via a remote link.” CX-0002C at Q/A 106. But, during prosecution, the applicants repeatedly argued that a distinguishing feature of their invention was that the two guides were in communication. *See, e.g.,* JX-0009 (’263 file history) at .000685-694; *see also* JX-0010 (’801 file history) at .000374-384. For both guides to be “in communication,” *both* guides must “use the remote access link,” not just the remote access guide as in Rovi’s constructions. Accordingly, because the use of a remote access link is not a point of distinction between *local* and *remote access* interactive television program guides, it is not helpful in the constructions and not included in Comcast’s proposal. *See* RX-0007 at Q/A 139.

Resps. Br. at 74-74.

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Rovi presents no argument about this limitation in its reply. *See generally* Rovi Reply, Section VI(D). Comcast's reply essentially reargues its post-hearing brief. *See* Resps. Reply at 17.

The administrative law judge construes "remote access interactive television program guide" to mean "guide allowing navigation through television program listings using a remote access link."

The claim term itself does not contain an explicit location-based limitation, as Comcast urges. Additionally, the words in close proximity to the term specify that "a remote program guide access device," which implements the remote access guide, is located outside of the home; the location-based limitation modifies the device, not the guide. *See* JX-0002 at 28:38-39. Other independent claims contain similar distinctions. *See generally* JX-0002 at 28:7-32:38 (*e.g.*, claims 5, 8, 11, and 17). Thus, the administrative law judge does not construe the term to require that the remote access guide be "outside a user's home."

Furthermore, the specification, including the figures, supports the construction. In particular, Figs. 2a-2b depict that the remote access guide communicates over "remote access link 19." The specification explains:

As shown in FIGS. 1 and 2a-2d, interactive television program guide equipment 17 communicates with remote program guide access device 24 via remote access link 19. In practice, remote program guide access device 24 may be connected to user television equipment (as shown in FIGS. 2a and 2c), television distribution facility 16 (as shown in FIG. 2b), connected to both (as indicated in FIG. 1), or may communicate with remote program guide server 25 (as shown in FIG. 2d) via remote access link 19. Remote access link 19 may be any suitable wired or wireless communications path or paths over which digital or analog communications may take place between interactive television program guide equipment 17 and remote program guide access device 24.

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JX-0002 at 6:48-60; *see also id.* at 2:39-56, 12:23-46.<sup>78</sup>

The parties also both rely upon expert testimony to advance their arguments. Given that the parties' experts' testimony essentially dovetails with the parties' arguments, the administrative law judge finds that this extrinsic evidence is not particularly significant, vis-à-vis the intrinsic record, when "determining 'the legally operative meaning of claim language.'" *See Phillips*, 415 F.3d at 1317.

(4) *Remote program guide access device / remote interactive television program guide access device*

The term "remote program guide access device" appears in claims 1 and 5 of the '263 Patent. JX-0002 at 28:38-48; 29:12-20 (the term also appears in the specification many times).

The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
device connected to program guide equipment over a remote access link	equipment for accessing a remote interactive television program guide <sup>79</sup>

Rovi Br. at 78; Resps. Br. at 77-78.

Rovi's argument in relation to this term (which is presented in conjunction with argument for the term "remote interactive television program guide access device") follows:

Respondents again improperly attempt to limit these terms to guides "outside a user's home." Resps. P.H. Br. at 192. One of ordinary skill in the art would agree with Rovi's proposed constructions—"device connected to program guide equipment over a bidirectional remote access link" and "device connected to

<sup>78</sup> The specification also describes a remote control (40). *See* JX-0002 at 1:31-33; 7:41-52. Although Comcast does not address the remote control, it is believed a person of ordinary skill in the art would understand the "remote" control would normally be stored within the user's home.

<sup>79</sup> Comcast proposes construing "interactive television program guide" as an "application that, when executed, causes television program listings to be presented to the user and enables the user to navigate through the program listings, to select an individual listing, and to select a function associated with the selected listing[.]" *See* Resps. Br. at 70-71; RX-0007C at Q/A 122.



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program guide equipment over a remote access link” for the reasons discussed with respect to the prior term. CX-0002C (Shamos WS) at Q/A 108, 110. Because the remote interactive television program guide access device is interactive, the remote access link must be bidirectional. CX-0002C (Shamos WS) at Q/A 108 (explaining addition intrinsic evidence in support of Rovi’s construction); JX-0002 (’263 Patent) at col. 1, lns. 23-28 (“Preferably remote access link 19 is bidirectional.”).

Rovi Br. at 48.

Comcast’s argument (which is also presented in conjunction with argument for the term “remote interactive television program guide access device”) in relation to this term follows:

Turning to the final two guide limitations, “remote interactive television program guide access device” and “remote program guide access device,” the parties proposed constructions are essentially extensions of the dispute over the construction of “remote access interactive television program guide.” Thus, for the same reasons already discussed, “remote interactive television program guide access device” and “remote program guide access device” should be construed as “equipment for accessing a remote access interactive television program guide.”

Resps. Br. at 77-78.

Neither Rovi’s nor Comcast’s reply addresses this construction.

The administrative law judge construes the terms “remote program guide access device” and “remote interactive television program guide access device” to mean “equipment for accessing a remote interactive television program guide over a remote access link.”

Claim 1 specifies that a “remote access interactive television program guide is implemented” on the “remote program guide access device.” The plain purpose of the “remote . . . device” is to implement the “remote . . . guide.” Comcast’s proposed construction, while mostly acceptable, does not acknowledge the slight difference between the terms “remote program guide access device” and “remote interactive television program guide access device.” The portion of Rovi’s proposed construction that relies upon a distinction of “bidirectional” and

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“unidirectional” links addresses the different words. *See CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”). Further, the specification and figures indicate that a remote program guide access (24) device utilizes a link (19). JX-0002 at 6:48-60 (“As shown in FIGS. 1 and 2a-2d, interactive television program guide equipment 17 communicates with remote program guide access device 24 via remote access link 19.”).

### (5) *Remote interactive television program guide access device*

The term “remote interactive television program guide access device” appears only in claims 14 and 17 of the ‘263 Patent. JX-0002 at 31:12-25; 32:9-21 (it does not appear in the specification). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
device connected to program guide equipment over a bidirectional remote access link.	equipment for accessing a remote access interactive television program guide

Rovi Br. at 78; Resps. Br. at 78-79. Rovi’s and Comcast’s arguments in relation to this term are presented above, along with the “remote program guide access device” term.

The administrative law judge construes the term “remote interactive television program guide access device” to mean “equipment for accessing a remote interactive television program guide over a bidirectional remote access link.” The construction comports with the plain purpose of the “remote . . . device” and also accounts for the additional words (*e.g.*, interactive television) in this term. *See CAE Screenplates*, 224 F.3d at 1317 (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”).

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(6) *User television equipment*

This term appears in claims 1, 2, 6, 9, 12, 15, and 18, and it is used many times in the specification. *See generally* JX-0002. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
any equipment capable of use by a user to display program listings and to record television programs	Comcast does not clearly present a construction in its post-hearing brief.

*See* Rovi Br. at 49; Resps. Br. at 81-82.

Rovi's opening argument for this term follows:

One of ordinary skill in the art would agree with Rovi's proposed construction—"any equipment capable of use by a user to display program listings and to record television programs." CX-0002C (Shamos WS) at Q/A 112. The specifications make clear that "user television equipment" is a broad term. *Id.*; JX-0002 ('263 Patent) at col. 6, ln. 64 – col. 7, ln. 1. Further, Figs. 3 and 4 of the '263 Patent show the user television equipment as including a television 36, remote control 40, secondary storage device 32, set-top box 28, digital storage device 31, user interface 46, digital storage device 49, secondary storage device 47, communications device 51 and display device 45. JX-0002 ('263 Patent) at Figs. 3-4. In the Patents, the recited purpose of the "user television equipment" is to display program listing and record television programs. CX-0002C (Shamos WS) at Q/A 112. What records television programs thus falls within the scope of "television equipment." CX-1901C (Shamos RWS) at Q/A 37 (discussing additional intrinsic evidence in support of Rovi's construction).

Rovi Br. at 49.

Comcast's argument for this term follows:

The party's [*sic*] proposed construction [*sic*] of "user television equipment" are provided in RDX-0842. Comcast's proposed construction is consistent with the plain and ordinary meaning of this limitation to one of ordinary skill in the art in light of the intrinsic evidence. RX-0007C at Q/A 174.

There are two problems with Rovi's construction. First, it is overbroad because it would read the word "television" out of the

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claims. For example, Rovi's construction would cover a personal computer, which is capable of being configured to display program listings and record television programs but is inarguably not a "television" as a POSITA would understand. RX-0007C at Q/A 175. Second, Rovi's construction leads to the absurd result that the agreed construction for "user site" would no longer be limited to the site of the user when Rovi's construction of "user television equipment" is combined with the other agreed constructions. Because "user television equipment" would no longer be limited to a television in Rovi's construction, the equipment would not need to be in the user's home. But the parties have agreed that "user site" means "location of the user equipment" and that "user equipment" means "user television equipment." Thus, "user site" means "location of the [user television equipment]." Under Rovi's overbroad construction of "user television equipment" this would mean that "user site" is no longer limited to a fixed point, like the user's home. This would render the "user site" limitation meaningless. This problem is averted by adopting Comcast's construction which would lead to a "user site" construction of "location of the television equipment associated with the user." This construction makes sense and is consistent with the plain and ordinary meaning.

Rovi criticizes Comcast's construction by arguing that "associated with a user" is unclear. See CX-0002C (Shamos WS) at Q/A 113. Dr. Shamos's hypothetical where a television could potentially be associated with users A, B, and C does not present a problem. It would not be difficult for a POSITA to determine that the television equipment is associated with a single subscriber whether or not it is available to multiple individuals within that household. See RX-0007C at Q/A 179.

Resps. Br. at 81-82.

Rovi replies:

Respondents misrepresent the scope of the inventions and the specifications, stating: "Rovi's construction [of user television equipment] would cover a personal computer, which is capable of being configured to display program listings and record television programs but is inarguably not a 'television' as a POSITA would understand [*sic*]." Resps. Br. at 81. The specifications of the Asserted Patents *explicitly* state that "user television equipment" includes a personal computer: "[o]ther suitable types of user television equipment may be based on personal computer

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televisions (PC/TVs)...” JX-0003 (‘801 Patent) at 4:17-20, 11:59-62, 31:61-65. Thus, Respondents’ argument is unpersuasive.

Rovi Reply at 32.

The administrative law judge construes the term “user television equipment” to mean “equipment for displaying television program listings information and other program guide data using a local interactive television program guide.” See JX-0002 at 7:61-64 (“Each user has user television equipment 22 for displaying the television program listings information and other program guide data using a local interactive television program guide.”). Further, this construction is consistent with the specification, and it also allows for other uses such as the display of programming (*e.g.*, watching television shows).

Rovi’s construction is overly broad to the extent it seeks to encompass “any equipment.” Conversely, Rovi’s construction is overly narrow to the extent it requires the user television equipment “to record.” While the preamble of claim 1 indicates that the claimed system is “for recording,” the body of the claim indicates that “the local interactive television program guide . . . records the television program . . . using the local interactive television program guide equipment.” See JX-0002 at 28:59-63.

(7) *Generates[/ing] . . . a display*

Claim 1 of the ‘263 Patent utilizes the term “generates a display” twice. See JX-0002 at 28:35, 28:44 (“Generates a display” only appears in claims 5, 8, 11, 14, and 17. It does not appear in the specification). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
Generates[/ing] data representing a display	Comcast does not clearly present a construction in its post-hearing brief.

Rovi Br. at 49; Resps. Br. at 82-83.

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Rovi's opening argument for this phrase follows:

One of ordinary skill in the art would agree with Rovi's construction—"generates[/ing] data representing a display." CX-0002C (Shamos WS) at Q/A 114. This straightforward construction explains what generating a display means and is consistent with the disclosure in the specifications. *See* JX-0002 ('263 Patent) at col. 6, lns. 1-8, col. 9, lns. 15-19, col. 14, lns. 2-19, col. 20, lns. 1-5.

Respondents' proposed construction requires that what does the "generating" also "create[s] data sufficient to provide a display" and "provide[s] that data to a display device." Resps. P.H. Br. at 199-200. As with the "local interactive television program guide" term, this is another attempt by Respondents to limit the local guide to equipment within the user's home that must—under Respondents' construction—"create data sufficient to provide a display" and "provide that data to a display device." If something other than the television equipment in the user's home "creates the data," then, under Respondents' construction, that would be excluded from the scope of the claims. However, and as discussed previously, the specifications contemplate a client-server based program guide where the program guide server generates program guide display screens as digital frames and distributes the frames to user television equipment 22 of Figure 2d. JX-0003 ('801 Patent) at col. 8, ln. 52 – col. 9, ln. 60, col. 10, lns. 2-9, col. 40, lns. 6-30, col. 41, lns. 6-32, Fid. 2d. As Dr. Wigdor testified at the hearing, this embodiment would be excluded under Respondents' construction. Wigdor Tr. 895. In a cable system, consistent with the disclosed embodiments, the user television equipment (inside the home) works with portions of the cable network outside the home to receive data needed to generate a display on the user's television equipment. CX-0002C (Shamos WS) at Q/A 115 (discussing other intrinsic evidence supporting Rovi's construction).

Rovi Br. at 49-50.

Comcast's opening argument for this phrase follows:

The party's [*sic*] proposed construction [*sic*] of "generates[/ing] ... a display" are provided in RDX-0843. Comcast's construction is supported by the specification, which recognizes a difference between the generating of a display screen and the displaying of that screen to the user. For example, the patents describe an embodiment where the local guide receives communications from

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a remote device, generates “the appropriate program guide display screen,” and “send[s] the program guide display screen back” to the remote device “for display on [a] user interface.” JX-0002 (‘263 Patent) at 14:11-19. Thus the specifications show that there is a distinction between generating the display screen and displaying it.

Rovi mischaracterizes Comcast’s proposed construction as requiring that “the element that generates the display must talk directly to the display device.” CX-0002C (Shamos WS) at Q/A 115. Under Comcast’s construction, the same element could both generate and display or one element could generate the display screen and *indirectly* pass it to the display device. Either scenario would be included in Comcast’s construction.

Dr. Shamos constructs a hypothetical involving a browser rendering an HTML file and incorrectly suggests that the browser “generates” the display by rendering the HTML file. This hypothetical demonstrates a misunderstanding of Comcast’s proposed construction. *Rendering* an HTML file, or similar types of data, is not *generating* a display. On the contrary, creating the HTML file and passing it to a browser is “generating” a display because it “creates data sufficient to provide a display [the HTML file] and provides that data to a display device [browser] to create [render] the display.” RX-0007C (Wigdor WS) at Q/A 186.

Resps. Br. at 82-83.

Comcast replies:

There is nothing to add over Respondents post-hearing brief (Resp. PoHB at 81-82) other than to note Rovi offers no criticisms of Respondents’ construction. *See* Compl. PoHB at 49.

Resps. Reply at 19.

The administrative law judge construes the term “generates a display” to mean “creates a display.”<sup>80</sup>

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<sup>80</sup> According to Rovi, this construction is superfluous because the parties do not dispute that the X1 system generates a display under either party’s construction. *See* Rovi Reply at 35, which argues:

Based on Respondents’ admission, the parties agree that the X1 system generates a display of one or more program listings as

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Rovi's construction simply adds the words "data representing" without any substantive development of the concept; Rovi does not explain why "data representing" is a necessary addition or why "data" is not otherwise inherent in the plain language itself.

- (8) *Wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device*

This phrase appears in claims 1 and 5 of the '263 Patent. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No further construction necessary, plain and ordinary meaning.	Comcast does not clearly present a construction in its post-hearing brief.

Rovi Br. at 51-52; Resps. Br. at 78.

Rovi argues:

One of ordinary skill in the art would agree with Rovi's proposed construction—"No further construction necessary, plain and ordinary meaning." CX-0002C (Shamos WS) at Q/A 116, 119. The meaning of the "wherein" clauses is clear from the text of the claim limitations themselves. The parties agree that the display must be based on a user profile stored somewhere other than on the remote program guide access device. Indeed, the claim language states "a user profile stored at a location remote from the remote interactive television program guide access device." JX-0002 ('263 Patent) at col. 31, lns. 1-31. In the face of the plain meaning of this term, Respondents' proposed construction adds the unsupported additional requirement that the user profile be "stored, *and used*, other than on the remote interactive television program guide access device." Resps. P.H. Br. at 192-96 (emphasis added).

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required by the Asserted Claims under Rovi's construction or under Respondents' construction without the "in the user's home" requirement. *See* Compls. Br. at 43-46 (discussing the construction of local interactive television program guide) and 66-70 (discussing infringement by the X1 system of the Asserted Claims). Thus, the only dispute between the parties is whether the X1 system contains a local guide.



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Respondents' construction is expressly contradicted by the specifications, for example, JX-0002 ('263 Patent) at col. 17, lns. 4-18. Respondents' expert, Dr. Wigdor, admits he is improperly reading in a "use" limitation from one of the disclosed embodiments. RX-0007C (Wigdor WS) at Q/A 161. Within the scope of the asserted claims, the user profile information could be stored on a server (*i.e.*, not on the remote access device), transmitted to the device over the Internet, and then used on the device to generate display of the remote interactive television program guide. CX-0002C (Shamos WS) at Q/A 116-18 (explaining additional intrinsic evidence in support of Rovi's construction); Shamos Tr. 250-54 (same).

Rovi Br. at 51-52. Rovi then provides examples of "user profile" information in a footnote. *Id.* at 52 n.9.

Comcast argues that its "constructions are consistent with the intrinsic evidence. The only specification disclosure of generating a display for a remote device using a user profile, discloses that the profile is stored and used somewhere other than the remote device in order to reduce the amount of data that needs to be sent to the remote device." Resps. Br. at 78. Comcast cites three lines of the specification, a complaint from a different lawsuit, inventor testimony, and expert testimony that dovetails with Comcast's argument. *Id.* The specification text that Comcast cites explains:

User preference profiles may also be used to limit the amount of data provided to remote program guide access device 24 and **thereby tend to minimize the bandwidth requirements of remote access link 19.**

*Id.* (citing JX-0002 at 17:37-40 (emphasis added by Comcast)).

The administrative law judge has determined that it is not necessary to construe this phrase. The meaning of the phrase is clear and self-explanatory, and the parties agree that the display must be based on a user profile stored somewhere other than on the remote program guide access device.

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- (9) *Wherein the remote interactive television program guide access device generates a display of a plurality of program listings based on a user profile stored at a location remote from the remote interactive television program guide access device*

This phrase appears in claims 14 and 17 of the '263 Patent. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No further construction necessary, plain and ordinary meaning.	Comcast does not clearly present a construction in its post-hearing brief.

Rovi Br. at 51-52; Resps. Br. at 78.

The parties do not present independent argument with relation to this phrase. Rather, the parties present argument for this phrase along with the “wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device” phrase discussed above. Accordingly, the administrative law judge has determined that it is not necessary to construe this phrase for the reasons provided in the above subsection.

- (10) *Recording by [a / the] local interactive television program guide*

The phrases “recording by a local interactive television program guide” and “recording by the local interactive television program guide” appear in claims 1, 5, 8, and 11 of the '263 Patent. JX-0002 at 28:52-53; 29:26-27; 30:4-5; 30:42-43. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
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<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
recording by the local interactive television program guide equipment on which the local interactive television program guide is implemented	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 52; Resps. Br. at 79-80.

Rovi argues:

One of ordinary skill in the art would agree with Rovi's proposed construction—"recording by the local interactive television program guide equipment on which the local interactive television program guide is implemented." CX-0002C (Shamos WS) at Q/A 121, 123. As discussed above at Sections V(C)(2)(b)-(d), there is no geographic limitation regarding the local guide. Rovi's construction for this term is consistent with its use in the specifications of the Patents. See JX-0002 ('263 Patent) at col. 11, lns. 4-44, col. 12, lns. 10-13, col. 17, lns. 48-50, col. 24, lns. 36-39.

As with the "local" interactive television program guide term, Respondents' proposed construction again imposes a geographical limitation by limiting the recording to being "initiated" by the local interactive program guide (which in turn, according to Respondents, must be located solely inside a user's home). Resps. P.H. Br. at 196-98. The word "initiates" does not appear anywhere in the intrinsic record of the Patents. Moreover, there is no requirement that the equipment within the users' home initiate the recording as Respondents' construction would require. Within the claims, it is: (a) the user of the remote guide who requests a recording; (b) the remote guide which communicates the recording request to the local guide; and (c) the local guide which records the television program. See CX-0002C (Shamos WS) at Q/A 122 (explaining additional intrinsic evidence in support of Rovi's construction). Respondents are improperly attempting to introduce causal and geographical limitations into the claims.

Rovi Br. at 53-54.

Comcast's argument, which is comingled with five other disputed phrases, follows:

Comcast's proposed constructions are consistent with the intrinsic evidence. In every embodiment disclosed in the patent specification, it is the guide software that initiates the recording. See, e.g., JX-0002 ('263 Patent) at 12:19-22, 17:54-59, 24:36-39,

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and 24:44-51. This repeated aspect of the specification is recognized in Comcast's proposed constructions.

Rovi takes issue with the word "initiates" in Comcast's constructions and argues that the *remote guide* could also be said to "initiate" a recording when it remotely requests a recording. See, e.g., CX-0002C (Shamos WS) at Q/A 122. While it is true that the remote guide communicates a scheduling request, in every embodiment in the patent it is the *local guide* which receives this request from the remote guide and it is the *local guide* that actually initiates the recording. See, e.g., JX-0002 at 12:19-22, 17:54-59, 24:36-39, and 24:44-51.

Rovi's constructions, on the other hand, do nothing more than rearrange the words of the limitation and, therefore, do not explain their meaning. Further, for the "recording by [a/the] local interactive television program guide," limitation Rovi inserts the concept of the local guide *equipment* to a limitation that otherwise did not contain it. By inserting the local guide equipment into this construction, Rovi excludes an embodiment described in the specification where the local guide records a program on a program guide server. See *id.* at 24:44-51.

Furthermore, by changing the claim term to only require that equipment perform the recording, Rovi would remove the local guide entirely from the process of recording. In other words, under Rovi's construction, the *local guide* need not be involved at all in the recording, only the *equipment* on which the local guide is implemented. This changes the meaning of the claim term.

Resps. Br. at 79-81.<sup>81</sup>

The administrative law judge has determined that the phrase "recording by a local interactive television program guide" does not need construction.

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<sup>81</sup> The six terms to which this argument applies are: "(1) 'recording by [a / the] local interactive television program guide,' (2) 'records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment,' (3) 'records the television program corresponding to the selected television program listing using the local interactive television program guide equipment,' (4) 'recording by the local guide,' (5) 'responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment,' and (6) 'responsive to the communication, schedules the program corresponding to the selected program listing for recording at the appropriate time using the television equipment' [which] are provided in RDX-0839 to RDX-0841.").

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The disputed phrase is a portion of a “wherein” clause that modifies “the remote access interactive television program guide.” The relevant claim language follows:

[the remote access interactive television program guide] . . . receives a selection of a program listing of the plurality of program listings in the display, wherein the selection identifies a television program corresponding to the selected program listing for ***recording by the local interactive television program guide***[.]

JX-0002 at 28:42-53 (emphasis added on disputed phrase). In general terms, the claim then provides that the selection is transmitted to the local interactive television program guide and that the local interactive television program guide records the selected program. *See* JX-0002 at 28:54-58 (*inter alia*, transmitting) and 28:59-63 (*inter alia*, recording). Within this context, the claim denotes that the system “recording” occurs after the system “receives a selection of a program listing[.]” *Id.* at 28:49.

In using the present tense “records,” Rovi’s proposed construction upsets the system’s ordered logic. Further, Rovi’s proposed construction introduces a “using” requirement that already appears at the end of claim 1. *See* JX-0002 at 28:59-63 (“the local interactive television program guide receives the communication and records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment.”).

Comcast’s arguments about the construction also upset the system’s ordered logic insofar as the argument requires the local interactive program guide to initiate a recording before it has even received the communication identifying the selected program. *See* JX-0002 at 28:54-58 (transmitting). Furthermore, the word “initiates” does not appear in the ‘263 Patent. *See generally* JX-0002; CX-0002C at Q/A 127. While it makes sense that the recording does not initiate on its own, there is no reason to construe the disputed phrase to require initiation.

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- (11) *Records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment*

The phrase “records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment” appears only in claims 1 and 14 of the ‘263 Patent.<sup>82</sup> JX-0002 at 28:60-63; 31:28-31 (The phrase “the television program corresponding to the selected program listing” appears in claims 1-3 and 5-17.). The parties propose the following construction:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
records the television program corresponding to the selected program listing identified in the communication using the local interactive television program guide equipment	Comcast does not clearly present a construction in its post-hearing brief.

The parties brief this phrase along with the phrases “recording by [a / the] local interactive television program guide” and “recording by the local guide.” *See* Rovi Br. at 53-54 (Section V(C)(2)(h)); Resps. Br. at 79-81 (Section VIII.B.3.c).

The administrative law judge construes the phrase “records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment” to mean “records the television program corresponding to the selected program listing identified in the communication using the local interactive television program guide equipment.”

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<sup>82</sup> Rovi’s Brief indicates that this phrase appears in claims 1 and 10 of the ‘413 Patent.

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Apart from replacing “responsive to” with “identified in,” Rovi’s proposed construction simply repeats the claim language. The construction is consistent with other terminology used in the claim and clarifies any ambiguity (if any existed) that attached to the words “responsive to.”

Comcast’s proposed construction, which largely reorders words in the phrase, introduces an “initiation” requirement. As noted above, the word “initiates” does not appear in the ‘263 Patent. While it makes sense that the recording does not initiate on its own, there is no reason to construe the disputed phrase to require initiation.

### *(12) Communication*

This term appears in the ‘263 Patent (claims 1, 14, and 17), the ‘801 Patent (claims 1, 5, and 10), and the ‘413 Patent (claims 1 and 10). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No further construction necessary, plain and ordinary meaning which is “message”	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 54-55; Resps. Br. at 83-84 (citing RDX-0844).

Rovi’s argument follows:

The parties agree that the plain and ordinary meaning of this term applies. Resps. P.H. Br. at 200. However, the parties apparently dispute the application of the plain meaning of this claim term—Respondents’ expert, Dr. Wigdor, asserts that the plain meaning of “communication” additionally requires that the format and content of the communication to be identical from start to finish. Wigdor Tr. 906 (testifying that “it is a necessary but not sufficient condition” that the “format of the communication ha[s] to stay the same from the time that communication is transmitted to the time that communication is received.”). There is no such additional requirement. Dr. Wigdor’s application of the term is inconsistent with the plain meaning and excludes the very activity disclosed in the specifications of the Patents, which includes passing on a communication from one device (such as a remote access device)

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to another device (such as the local guide or television equipment) wherein the communication contains information “identifying the television program corresponding to the selected program listing.” JX-0002 (‘263 Patent) at col. 17, lns. 48-62, col. 28, lns. 27-64; CX-0002C (Shamos WS) at Q/A 125. Indeed, under Dr. Wigdor’s alleged plain meaning, an email would not be a “communication” because an email “communication” goes through many formats (and arguably) content changes as it traverses the Internet. Wigdor Tr. 905-12.

Rovi Br. at 54-55.

Comcast’s argument follows:

The party’s [*sic*] proposed construction [*sic*] of “communication” are provided in RDX-0844. Both parties say that no construction is necessary, yet Rovi tries to backdoor a construction of “message.” This construction is improper because “communication” does not mean “message” to a POSITA and Rovi has not identified any portion of the intrinsic evidence that would support this construction.

Dr. Shamos’s analogy of relaying a message to his spouse through his daughter (see CX-0002C at Q/A 125) is a good example of why Rovi’s construction is wrong. While the meaning of his “message” might be ultimately received by his spouse, the “communication” from Dr. Shamos to his daughter is clearly different from the “communication” from his daughter to his spouse. RX-0007C (Wigdor WS) at Q/A 191.

Comcast’s construction is also confirmed by the plain language of the claims themselves. In the claims, the “communication” that is sent by the remote guide must be the same communication received by the local guide because the first time “communication” is used in the claims it is referred to as “a communication,” and any subsequent times it is used in the same claim, it is referred to as “the communication” meaning that “the communication” takes its antecedent basis from “a communication,” which means both “communications” are exactly the same. *Id.* at Q/A 192; Tr. 225:4-8 (Dr. Shamos admitting same). For example, ‘801 claim 1 recites “transmitting, with the remote guide, a communication to the local guide” and “receiving the communication with the local guide.” Similar recitations are found in every asserted independent claim of all three patents.

Resps. Br. at 83-84.



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The administrative law judge construes “communication” to mean “message.”

The claims and specification generally use the term “communication” in an ordinary manner. *See* JX-0002 at 10: 41-43 (“Remote program guide access device 24 may communicate with interactive television program guide equipment 17 using any suitable scheme.”). While specific examples of communication protocols are provided, *see* JX-0002 at 10:29-40, the specification typically uses generalized “communication” terms:

- FIGS. 6a, 6b, and 6c are schematic block diagrams of illustrative arrangements *for supporting communications* between a remote program guide access device and interactive television program guide equipment over an Internet link in accordance with the principles of the present invention. *See* JX-0002 at 4:60-64 (emphasis added).
- *Requests, commands, or other suitable communications* may be provided by remote program guide access device 24 to user television equipment 22 and then forwarded by user television equipment 22 to program guide server 25. *See* JX-0002 at 6:18-22 (emphasis added).
- As shown in FIGS. 1 and 2a-2d, interactive television program guide equipment 17 communicates with remote program guide access device 24 via remote access link 19. In practice, remote program guide access device 24 may be connected to user television equipment (as shown in FIGS. 2a and 2c), television distribution facility 16 (as shown in FIG. 2b), connected to both (as indicated in FIG. 1), or may communicate with remote program guide server 25 (as shown in FIG. 2d) via remote access link 19. Remote access link 19 may be *any suitable wired or wireless communications path* or paths over which *digital or analog communications* may take place between interactive television program guide equipment 17 and remote program guide access device 24. *See* JX-0002 at 6:48-60 (emphasis added).
- In still another approach, user interface 52 may include an alphanumeric pager (among other suitable devices for providing *bi-directional communications* with the program guide via remote access link 19). *See* JX-0002 at 16:11-14 (emphasis added).
- Access communicators may include *any client-server or peer-to-peer communication* construct suitable for providing program guide information across remote access link 19. *Access communications may include*, for example, requests, commands, messages, or remote procedure calls, as indicated by substeps 1204, 1205, 1206, and 1207, respectively. *See* JX-0002 at 22:15-21 (emphasis added).

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Comcast's argument about the proposed construction adds an exact-identity requirement that is not supported by the claim language or the specification. The claims, however, are not written with the level of detail that appears in Comcast's argument.

### 3. Representative Products

Rovi argues:

Each of the Accused Products falls into one of two groups: (a) the "Legacy Guide Accused Products" and (b) the "X1 Accused Products." All of the products in each group are "representative" of that group with respect to the Asserted Claims. CX-0002C (Shamos WS) at Q/A 28. Based on this, the AX013ANC is representative of all Comcast X1 products and the DCX35001M is representative of all Comcast Legacy products. *Id.* . . .

Rovi Br. at 57. Rovi relies upon Dr. Shamos's testimony and Comcast, ARRIS, and Technicolor technical documents to show how the X1 and Legacy systems operate in the same manner in terms of infringement with respect to the '263, '413 and '801 Patents. *See id.* (citing at CX-0002C (Shamos WS) at Q/A 167-69). Rovi argues that Comcast's expert, Dr. Wigdor, relied on the same documents in describing how the products operate and that Dr. Wigdor "did not distinguish amongst DVR, non-DVR, or 'cloud' sub-categories" of the accused products. *Id.* at 57-58. Rovi then argues that Dr. Wigdor's testimony confirms that the analysis for the X1 and Legacy systems does not change based on components within a set-top box having a particular model number. *Id.* at 58-59 ("... for every asserted claim, some of the infringing functionality may be on the set-top box, and some of the functionality may be on a different set-top box with a DVR or on a server within Comcast's 'cloud.'" CX-0002C (Shamos WS) at Q/A 149-52; CX-1901C (Shamos RWS) at Q/A 25-29."). Rovi then argues:

Comcast's corporate witnesses testified repeatedly that the recording functionality of the X1 system does not change based on RF front end, SoC, manufacturer, cloud DVR, non-DVR, etc. Peter Nush, John McCann, Stephen Allinson, John Robinson, and

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Sean Brown testified that there is no difference in functionality in the X1 system or the STBs based on RF front end, SoC, manufacturer, cloud DVR, non-DVR, etc. McCann Tr. 759-60 (testifying that the [ ] source code does not change based on model or vendor of a set-top box and all X1 devices connect to the same pool of [ ] JX-0109C (Nush Dep. Tr.) 130; JX-0105C (McCann Dep. Tr.) 87-88, 121; JX-0086C (Allinson Dep. Tr.) 23, 44, 78, 84-85, 93-96, 133-134; JX-0113C (Robinson Dep. Tr.) 91-98; JX-0090C (Brown Dep. Tr.) 65-68; JX-0097C (Garcia Dep. Tr.) 146-147; JX-0093C (Day Dep. Tr.) 40-41, 70, 91, 101-102, 149, 150; JX-0092C (Davis Dep. Tr.) 172.

*Id.* at 59-60.

Comcast's argument is:

The STBs that Rovi accuses patents are listed in JX-0084C.000014-15. Comcast's proposed representative products are set forth in the charts below. *See* RX-0870C.0007-8[:]

**'263-'413-'801 Remote Scheduling Patents: X1 Products**  
Hardware Categories of Accused Products\*

Features	Accused Set-Top Box Receivers		
	Local DVR Models	Non-DVR Models	
Rep Model No.	Rep Model No.	Rep Model No.	
PX021ANM	AXD13ANM	PCRG150BNM	
Additional Models	Additional Models	Additional Models	
PX021ANM	PX021ANM PX021ANM PX021ANM PX021ANM PX021ANM PX021ANM	PCRG150BNM PX021ANM-X1 PX021ANM PX021ANM PX021ANM	

\* Does not include End of Life and Proactive Swap Models that are not readily determinable  
Rovi proposed representative Model No. AXD13ANM is shown in italicized red font

CONFIDENTIAL BUSINESS INFORMATION: Subject to Protective Order

**263-'413-'801 Remote Scheduling Patents: Legacy Products**  
Hardware Categories of Accused Products\*

Features	Accused Set-Top Box Receivers	
	Local DVR Models	Non-DVR Models
Rep Model No.	Rep Model No.	
MOTRNG200BNMR	PCRG150BNMR	
Additional Models	Additional Models	
MOTRNG200N SARNG200N SARNG200BNCD SARNG200BNCR	MOTRNG150CNMR MOTRNG150N PCRG1110C PCRG1110 RF PCRG1110 DCH3200 CHL500NC SARNG150W SARNG150BNCD SARNG150BNCR SARNG150 DCH70 DCH3200 DCT700 SARNG100 SA4250C MOTRNG150N	

\* Does not include End of Life and Proactive Swap Models that are not readily determinable  
Rovi proposed representative Model No. MOTRNG200BNMR is shown in italicized red font

Comcast has divided up the products up by whether they have DVR functionality and whether that DVR functionality is local or cloud-only because all of the asserted claims have elements requiring either scheduling a recording or actually performing the recording. Neither limitation would be met by a system that does not have DVR functionality. RX-0850C (Wigdor RWS) at Q/A 22-23. Rovi's proposal to group all of these products together, whether or not the products include DVR functionality, is unreasonable. *Id.*

Additional Legacy STBs have been classified by Comcast as "end of life" and "proactive swap." Rovi has failed to demonstrate why

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their proposed representative products are representative for these products. *See* JX-0084C.000016-19.

Resps. Br. at 69.

Rovi replies that it has met its burden and that

Rovi's expert, Respondents' experts, Comcast's engineers, Comcast's corporate representatives, Comcast's technical documents, and Comcast's source code all indicate that the remote recording functionality accused of infringement is performed in substantially the same way across all of the X1 and Legacy Accused Products regardless of model number and irrespective of any immaterial difference in hardware among the Accused Products" and that Dr. Wigdor "grouped each of his non-infringement assertions by Accused Product group—either X1 or Legacy."

Rovi Reply at 22-23.

The administrative law judge has determined that the products Rovi identified, the ARRIS XG1 v3 (X1) AX013ANC for all Comcast X1 products, and the Motorola DCX3501/M for all Comcast Legacy products, are representative products for purposes of the '263, '801, and '413 Patents. Rovi's allegations are supported by evidence, and Comcast has not sufficiently pointed to differences between the product groups it has identified.

#### **4. Literal Infringement**

Rovi asserts claims 1, 2, 14, and 17 of the '263 Patent against the X1 and Legacy systems. *See* Rovi Br. at 42, 60-87. Rovi argues that Comcast "directly infringes based on its testing and use of the Accused Products within the United States after importation." Rovi Br. at 60. Comcast's post-hearing brief contends that it does not infringe any of the asserted claims. *See* Resps. Br., Section VIII(C)(2).

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### *a) Claim 1*

Rovi divides its analysis for claim 1 in seven alphanumeric limitations (1pre, 1a, 1b, 1c, 1d, 1e, and 1f). *See* Rovi Br., Section V(E)(1). The subparts are presented, as follows:

[1pre] 1. A system for selecting television programs over a remote access link comprising an Internet communications path for recording, comprising:

[1a] a local interactive television program guide equipment on which a local interactive television program guide is implemented, wherein the local interactive television program guide equipment includes user television equipment located within a user's home and the local interactive television program guide generates a display of one or more program listings for display on a display device at the user's home; and

[1b] a remote program guide access device located outside of the user's home on which a remote access interactive television program guide is implemented, wherein the remote program guide access device is a mobile device, and wherein the remote access interactive television program guide:

[1c] generates a display of a plurality of program listings for display on the remote program guide access device, wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device;

[1d] receives a selection of a program listing of the plurality of program listings in the display, wherein the selection identifies a television program corresponding to the selected program listing for recording by the local interactive television program guide; and

[1e] transmits a communication identifying the television program corresponding to the selected program listing from the remote access interactive television program guide to the local interactive television program guide over the Internet communications path;

[1f] wherein the local interactive television program guide receives the communication and records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment.

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JX-0002 at 28:27-63; *see also* RX-0007C (Wigdor) at Q/A 104. Each subpart is addressed below.

### (1) *Limitation 1pre*

The text for this limitation is: “A system for selecting television programs over a remote access link comprising an Internet communications path for recording, comprising[.]” *See* Rovi Br. at 62.

### (a) *X1 System*

Rovi argues that the “Comcast X1 local guide, with a Comcast Xfinity AX013ANC set-top box (or PX011ANM set-top box), and Comcast Xfinity App (including the TV App and the TV Remote App), running on a mobile device, meet this element.” *Id.* at 62-63 (citing CX-0002C (Shamos WS) at Q/A 218); Tr. (Wigdor) 863-864 (stating that CX-1570 at 1 is a guide on the screen); CX-1570 (X1 Screenshots for the ‘263, ‘413, and ‘801 Patents); CX-1558 (Mobile Device TV Remote App Screenshot) (many additional exhibits are also cited)). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1pre also show that the following claim elements are met by the X1 system: ‘263 claim elements 14pre, 17pre; ‘413 claim elements 1pre, 10pre; and ‘801 claim elements 1pre, 5pre, 10pre, 10a, 10c, 15pre, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 242, 254, 263, 284, 299, 312, 326, 330, 340, 342, 346.

Rovi Br. at 65.

Comcast does not squarely address the preamble in its post-hearing brief. *See generally* Resps. Br. at 86-103.

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Accordingly, the administrative law judge has determined that the record evidence demonstrates that the accused X1 products satisfy this limitation.

### *(b) Legacy System*

Rovi argues that “Comcast Legacy local guide with a Comcast Xfinity DCX3501M (also referred to as the ARRIS MOTRNG200BNMR) set-top box, and Comcast Xfinity TV Remote App, running on a mobile device, meet this element.” Rovi Br. at 65-66 (citing CX-0002C (Shamos WS) at Q/A 219; CX-1781 (Legacy Guide Screenshots for the ‘801 Patent); CX-1558 (Mobile Device TV Remote App Screenshot) (many additional exhibits are also cited)). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1pre also show that the following claim elements are met by the Legacy system: ‘263 claim elements 14pre, 17pre; ‘413 claim elements 1pre, 10pre; and ‘801 claim elements 1pre, 1a, 5pre, 5a, 10pre, 10a, 10c, 15pre, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the ‘413 Patent); CX-1602 (Legacy Guide Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 242, 255, 263, 284, 299, 302, 312, 314, 324, 326, 330, 340, 342, 346.

Rovi Br. at 66.

Comcast does not squarely address the preamble in its post-hearing brief. *See generally* Resps. Br. at 103-104.

Accordingly, the administrative law judge has determined that the record evidence demonstrates that the accused Legacy products satisfy this limitation.

### *(2) Limitation 1a*

The text for this limitation is: “a local interactive television program guide equipment on which a local interactive television program guide is implemented, wherein the local interactive television program guide equipment includes user television equipment located within a user’s

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home and the local interactive television program guide generates a display of one or more program listings for display on a display device at the user's home[.]” *See* Rovi Br. at 66.

### (a) *X1 System*

Rovi argues that the “Comcast Xfinity AX013ANC set-top box (or PX011ANM set-top box) running Comcast X1 local guide meets this element.” Rovi Br. at 66 (citing CX-0002C (Shamos WS) at Q/A 221, 358-60). Rovi further contends that the “Accused Products satisfy this element under both parties’ proposed constructions” and that the servers that support the local guide are part of the local guide equipment. *See id.* at 66-67 (citing CX-0002C (Shamos WS) at Q/A 121, 363; Tr. (Shamos) 246-248). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1a also show that the following claim elements are met by the X1 system: ‘263 claim elements 14a, 14b, 14c, 17a; ‘413 claim elements 1a, 10a; and ‘801 claim elements 1a, 1b, 5a, 5b, 10a, 10b, 10c, 10d, 15a, 15, b, 15c, 15d. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 244, 246, 250, 257, 265, 286, 301, 304, 314, 316, 328, 330, 332, 341, 343, 345, 348.

Rovi Br. at 69-70.

Comcast argues that “Comcast’s X1 platform does not infringe any asserted claim because the X1 does not have a ‘local guide’ that generates a display of one or more program listings.” *Resps. Br.* at 87-92 (citing RX-0850C (Wigdor RWS) at Q/A 133, which identifies “local guide” limitations in the asserted claims). Comcast argues that it does not infringe “for two reasons. First there is no ‘local guide’ in the X1 platform under Comcast’s correct construction or a reasonable view of Rovi’s construction. . . . Second, even if a ‘local guide’ is presumed to exist on the STB, nothing on the STB can be found to ‘generate a display of one or



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more program listings' in the X1 platform." *Id.* at 88 (citation to RX-0850C (Wigdor RWS) at Q/A 138 omitted).

The evidence of record shows that the accused X1 products satisfy this limitation. Dr. Shamos testified that the AX013ANC set top box, running a Comcast XI local guide, generates a display of TV program listings for display on a TV in the home. *See* CX-0002C (Shamos WS) at Q/A 221, 358-60.

### *(b) Legacy System*

Rovi argues that the "Comcast Xfinity DCX3501M set-top box running Comcast Legacy local guide meets this element." Rovi Br. at 70 (citing CX-0002C (Shamos WS) at Q/A 222). Rovi concludes with the following:

The evidence and arguments made with respect to '263 claim element 1a also show that the following claim elements are met by the Legacy system: '263 claim elements 14a, 14b, 14c, 17a; '413 claim elements 1a, 10a; and '801 claim elements 1a, 1b, 5a, 5b, 10a, 10b, 10c, 10d, 15a, 15b, 15c, 15d. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the '413 Patent); CX-1602 (Legacy Guide Screenshots for the '801 Patent). CX-0002C (Shamos WS) at Q/A 245, 248, 250, 257, 265, 286, 302, 304, 314, 316, 326, 328, 330, 332, 342, 344, 346, 348.

Rovi Br. at 70.

Comcast does not argue that the accused Legacy products do not satisfy this limitation. *See generally* Resps. Br., Section VIII(C)(2)(b) (this limitation is not addressed).

The evidence of record shows that the accused Legacy products satisfy this limitation. Dr. Shamos testified that the DCX3501M set top box, running a Comcast Legacy local guide, generates a display of TV program listings for display on a TV in the home generates a display of TV program listings for display on a TV in the home. *See* CX-0002C (Shamos WS) at Q/A 221, 358-60.

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### (3) *Limitation 1b*

The text for this limitation is: “a remote program guide access device located outside of the user’s home on which a remote access interactive television program guide is implemented, wherein the remote program guide access device is a mobile device, and wherein the remote access interactive television program guide[.]” *See* Rovi Br. at 71.

#### (a) *X1 System*

Rovi argues that a “mobile device such as an iPhone or iPad running a Comcast Xfinity App, including the Xfinity TV APP or Xfinity TV Remote App, meets this element.” Rovi Br. at 71 (citing CX-0002C (Shamos WS) at Q/A 224). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1b also show that the following claim elements are met by the X1 system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1a, 10a, 10b; and ‘801 claim elements 1a, 5a, 10a, 10c, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 265, 286, 288, 301, 326, 330, 342, 346.

Rovi Br. at 71.

Comcast does not dispute that the X1 system meets this limitation. *See generally* Resps. Br., Section VIII(C)(2)(a) (this limitation is not addressed).

The evidence of record shows that the accused X1 products, including the Xfinity TV APP or Xfinity TV Remote App, satisfy this limitation. Dr. Shamos testified that a mobile device running Comcast Xfinity App, including the Xfinity TV APP or Xfinity TV Remote App, constitutes the claimed remote program guide access device located outside of the user’s home. *See* CX-0002C (Shamos WS) at Q/A 224.

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### (b) Legacy System

Rovi argues that a “mobile device running the Comcast Xfinity TV Remote App meets this element.” Rovi Br. at 72 (citing CX-0002C (Shamos WS) at Q/A 225). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1b also show the following elements are met by the Legacy system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1a, 10a, 10b; and ‘801 claim elements 1a, 5a, 10a, 10c, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the ‘413 Patent); CX-1602 (Legacy Guide Screenshots for the ‘801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 263, 286, 288, 302, 314, 326, 330, 342, 346.

Rovi Br. at 72.

Comcast does not dispute that the Legacy system meets this limitation. *See generally* Resps. Br., Section VIII(C)(2)(b) (this limitation is not addressed).

The evidence of record shows that the accused Legacy products, including the Xfinity TV Remote App, satisfy this limitation. Dr. Shamos testified that a mobile device running Comcast Xfinity TV Remote App constitutes the claimed remote program guide access device located outside of the user’s home. *See* CX-0002C (Shamos WS) at Q/A 224.

### (4) Limitation 1c

The text for this limitation is: “generates a display of a plurality of program listings for display on the remote program guide access device, wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device[.]” *See* Rovi Br. at 72.

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### (a) X1 System

Rovi argues that the “Comcast Xfinity App, including the TV App and TV Remote App, running on a mobile device, meets this element.” Rovi Br. at 72 (citing CX-0002C (Shamos WS) at Q/A 227). Rovi argues that the favorite channels, recording schedule indicators (*i.e.*, the red dot used to denote a recording has been scheduled), premium channel purchases, and parental controls form the foundation of a user profile. *See id.* at 72-74. Rovi then points to Comcast’s engineer’s testimony to show that the user profile is “stored at a location remote from the remote program guide access device,” (*e.g.*, in the cloud). *Id.* at 75 (citing, *inter alia*, JX-0090C (Brown Dep. Tr.) 81; CX-1697 (Xfinity DVR Cloud Video)). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1b [*sic*, 1c] also show that the following claim elements are met by the X1 system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1b, 1c, 3, 5, 9, 10b, 10c, 10d, 14, 18; and ‘801 claim elements 1a, 5a, 10a, 10c, 10d, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, 1641 (X1 Screenshots for the ‘801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 267, 269, 275, 278, 281, 288, 290, 293, 295, 297, 301, 314, 324, 330, 332, 342, 346.

Rovi Br. at 76 (Rovi’s conclusion for the Legacy products, *see* Rovi Br. at 77, correlates “to ‘263 claim element 1c” with the same limitations and dependent claims).

Comcast argues that “Comcast’s X1 platform does not infringe the limitations of the ‘263 and ‘413 patent claims related to the “remote guide” generating a display of program listings based on a user profile stored at a remote location. Resps. Br. at 97 (Section VIII(C)(2)(a)(v)). In particular, Comcast adds, “Rovi’s ‘favorites’ allegation fails because, under either construction, the client applications do not generate a display ‘based on a user profile stored at a

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location remote from the [remote program guide access device / mobile device]” because the “remote application uses a locally stored favorite channel list,” not a remotely stored list. *Id.*

The evidence of record shows that the accused X1 products satisfy this limitation. Dr. Shamos testified that a mobile device running a Comcast Xfinity App, including the Xfinity TV APP or Xfinity TV Remote App, generates program listings based on a user profile stored at a location remote from the remote program guide access device. *See* CX-0002C (Shamos WS) at Q/A 227. Indeed, Comcast’s engineers testified that [

] and Comcast’s Xfinity DVR Cloud Video, which instructs the user to sign into the app with a username and password, shows program listings based on user profile information. *See* JX-0090C (Brown Dep. Tr.) 81; CX-1697 (Xfinity DVR Cloud Video) at 0:31-0:44.

### *(b) Legacy System*

Rovi argues that the “Comcast Xfinity TV Remote App running on a mobile device meets this element.” Rovi Br. at 76 (citing CX-0002C (Shamos WS) at Q/A 228). Rovi argues that the analysis tracks the X1 analysis:

Just as in the X1 system, the generated display of program listing information of filtered favorite channels is based on the user’s profile stored at a location remote from the mobile device. JX-0090C (Brown Dep. Tr.) 65-68, 76-77, 80-82, 86-87, JX-0105C (McCann Dep. Tr.) 121-23; CX-1599 (Legacy Guide Screenshots for the ‘413 Patent) at 9-12 (showing filtering of listing based on the “Favorites Channels” filter); CX-1602 (Legacy Guide Screenshots for the ‘801 Patent) at 6-12 (recording of a program from a listing based on the “Favorites Channels” filter).

*Id.* at 77. Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1c also show the following elements are met by the Legacy system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1b, 1c, 3, 5, 9, 10b, 10c, 10d, 14, 18; and ‘801 claim elements 1a, 5a, 10a, 10c, 10d, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide

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infringement); CX-1599 (Legacy Guide Screenshots for the '413 Patent), CX-1602 (Legacy Guide Screenshots for the '801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 267, 269, 276, 279, 282, 288, 291, 293, 295, 297, 302, 314, 324, 330, 332, 342, 346.

*Id.*

Comcast's entire argument is:

Comcast's Legacy platform does not infringe any asserted claim of the '263 and '413 patents because the client applications do not generate a display of program listings based on a user profile stored at a remote location. The dispute here is exactly the same as for the X1 platform because the same client applications are used in both platforms. *See* § VIII.C.2.a.v.

Resps. Br. at 103.

The administrative law judge has determined that the accused X1 products meet this limitation. Accordingly, the administrative law judge has determined that the evidence of record shows that the accused Legacy products satisfy this limitation in light of Comcast's acknowledgement that the "dispute here is exactly the same as for the X1 platform the same client applications are used in both platforms." *Id.*

### (5) *Limitation 1d*

The text for this limitation is: "receives a selection of a program listing of the plurality of program listings in the display, wherein the selection identifies a television program corresponding to the selected program listing for recording by the local interactive television program guide[.]" *See* Rovi Br. at 77.

### (a) *X1 System*

Rovi argues that a "Comcast Xfinity TV Remote App running on a mobile device meets this element." Rovi Br. at 77 (citing CX-0002C (Shamos WS) at Q/A 230). Rovi adds that

... As shown in CX-1633 (X1 Screenshots for the '263 Patent) at 3-6, a user may select "Pit Bulls & Parolees" on the remote guide

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for recording; the remote guide thereby receiving a selection of a program listing for recording. The red dot on the remote guide (e.g., the user's recorded program preferences) indicates "Pit Bulls & Parolees" is recording, and the same is observed thereafter at the local guide as shown by CX-1633 (X1 Screenshots for the '263 Patent) at 9-10. . . .

*Id.* at 78. Rovi concludes with the following:

The evidence and arguments made with respect to '263 claim element 1d also show the following claim elements are met by the X1 system: '263 claim elements 14c, 17b; '413 claim elements 1b, 1c, 10c, 10d; and '801 claim elements 1b, 5b, 10b, 10d, 15b, 15d. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the '413 Patent); CX-1636, -1641 (X1 Screenshots for the '801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 267, 269, 290, 293, 304, 316, 328, 332, 344, 348.

*Id.*

Comcast argues that its "X1 platform does not infringe any asserted claim because it does not have a local guide 'recording' television programs." Resps. Br. at 95 (Section VIII(C)(2)(a)(iv)). Comcast's arguments essentially extend from its claim construction and non-infringement positions regarding the word "local." *Id.* ("As discussed above, the X1 STB does not have a "local guide" because the software that generates and navigates a grid of program listings is resident on [a] server in the cloud.").

The evidence of record shows that the accused X1 products satisfy this limitation. Dr. Shamos testified that a mobile device running Comcast Xfinity TV Remote App receives a show selection from programs listed in the app, for recording by the local guide. *See* CX-0002C (Shamos WS) at Q/A 230; *see also* CX-1697 (Xfinity DVR Cloud Video).

### (b) Legacy System

This is Rovi's entire argument:

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The Comcast Xfinity TV Remote App running on a mobile device meets this element. CX-0002C (Shamos WS) at Q/A 231. The screenshots at CX-1598.1-2 (Legacy Guide Screenshots for the '263 Patent) show "KPIX 5 News at 5PM" on channel 705 as depicted in both the local and remote guides. As shown by CX-1598 (Legacy Guide Screenshots for the '263 Patent) at 3-6, a user may select "KPIX 5 News at 5PM" on the remote guide for recording; the remote guide thereby receiving a selection of a program listing for recording. The red dot on the remote guide indicates "KPIX 5 News at 5PM" is recording, and the same is observed thereafter at the local guide as shown by CX-1598 (Legacy Guide Screenshots for the '263 Patent) at 7-8. The Accused Products satisfy this element under both parties' proposed claim constructions. JX-0105C (McCann Dep. Tr.) 66-67; JX-0090C (Brown Dep. Tr.) 25, 27-28, 71-72; JX-0093C (Day Dep. Tr.) 151-52.

Rovi Br. at 79. Rovi concludes with the following:

The evidence and arguments made with respect to '263 claim element 1d also show the following elements are met by the Legacy system: '263 claim elements 14c, 17b; '413 claim elements 1b, 1c, 10c, 10d; and '801 claim elements 1b, 5b, 10b, 10d, 15b, 15d. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the '413 Patent), CX-1602 (Legacy Guide Screenshots for the '801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 267, 269, 291, 293, 304, 316, 328, 332, 344, 348.

*Id.*

Comcast does not dispute that the Legacy system meets this limitation. *See generally* Resps. Br., Section VIII(C)(2)(b) (this limitation is not addressed).

The evidence of record shows that the accused Legacy products satisfy this limitation. Dr. Shamos testified that the Comcast Xfinity TV Remote App running on a mobile device receives a show selection from programs listed in the app, for recording by the local guide. *See* CX-0002C (Shamos WS) at Q/A 231.



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(6) *Limitation 1e*

The text for this limitation is: “transmits a communication identifying the television program corresponding to the selected program listing from the remote access interactive television program guide to the local interactive television program guide over the Internet communications path[.]” *See* Rovi Br. at 80.

(a) *X1 System*

Rovi argues that the “Comcast Xfinity TV Remote App, running on a mobile device, transmits a communication identifying the television program corresponding to the selected program listing from the remote access interactive television program guide to the local interactive television program guide over the Internet communications path.” Rovi Br. at 80 (citing CX-0002C (Shamos WS) at Q/A 233; JX-0105C (McCann Dep. Tr.) 66-67 and at JX-0090C (Brown Dep. Tr.) 25, 27-28, 71-72). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1e also show that the following claim elements are met by the X1 system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1d, 10d; and ‘801 claim elements 1c, 5c, 10e, 15e. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 271, 293, 306, 318, 334, 350.

Rovi Br. at 82.

Comcast argues that its “X1 platform does not infringe any of the asserted claims because X1 does not transmit a ‘communication’ identifying the user-selected program from the remote guide to the local guide.” Resps. Br. at 92 (Section VIII(C)(2)(a)(iii)). Comcast’s argument relies upon a hyper-technical reading of “communication,” where the communication sent from the remote guide is identical to the communication received by the local guide. *See id.* at 92-93.

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The evidence of record shows that the accused X1 products satisfy this limitation. Dr. Shamos testified that the Comcast Xfinity TV Remote App, running on a mobile device, transmits a communication, *e.g.*, a message, that identifies the selection, via the internet. *See* CX-0002C (Shamos WS) at Q/A 233; *see also* CX-1697 (Xfinity DVR Cloud Video).

### *(b) Legacy System*

Rovi argues that the “Comcast Xfinity TV Remote App running on a mobile device meets this element.” Rovi Br. at 82 (citing CX-0002C (Shamos WS) at Q/A 234). Rovi argues that “[f]or the reasons discussed in Section V(E)(1)(f)(i) [which addresses infringement of the X1 system], *supra*, regarding the communication between the remote guide and the local guide, the Legacy system remains infringing.” *Id.* at 82-83. Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1e also show that the following claim elements are met by the Legacy system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1d, 10d; and ‘801 claim elements 1c, 5c, 10e, 15e. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the ‘413 Patent), CX-1602 (Legacy Guide Screenshots for the ‘801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 271, 293, 306, 318, 334, 350.

*Id.* at 83.

Comcast argues that this limitation is not met, and acknowledges that the “dispute here is essentially the same as for the X1 platform.” Resps. Br. at 103.

The evidence of record shows that the accused Legacy products satisfy this limitation. Dr. Shamos testified that the Comcast Xfinity TV Remote App, running on a mobile device, transmits a communication, *e.g.*, a message, that identifies the selection, via the internet. *See* CX-0002C (Shamos WS) at Q/A 234.

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### (7) *Limitation 1f*

The text for this limitation is: “wherein the local interactive television program guide receives the communication and records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment[.]” *See* Rovi Br. at 83.

#### (a) *X1 System*

Rovi argues that the “Comcast X1 local guide running on a Comcast Xfinity AX013ANC set-top box (or PX011ANM set-top box) meets this element.” Rovi Br. at 83 (citing CX-0002C (Shamos WS) at Q/A 236). Rovi cites JX-0105C (McCann Depo. Tr.) 62-63 (“[ ]”) to support its argument that “recordings are stored on the hard drive on the set-top box.” *Id.* Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1f also show the following elements are met by the X1 system: ‘263 claim elements 2, 14d, 17c; ‘413 claim elements 1e; and ‘801 claim elements 1d, 1e, 5d, 5e, 10f, 10g, 15f, 15g. CX-1659 (Xfinity IPG Screenshots). CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1627, 1633, -1637 (X1 Screenshots for the ‘263 Patent); CX-1886 (Xfinity TV Remote for Google Play); CX-1887 (Xfinity TV Remote Screenshot); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 239, 252, 261, 273, 308, 310, 320, 322, 336, 338, 352, 354.

*Id.* at 83-84.

Comcast’s “communication” argument applies here. *See* Resps. Br. at 92 (Section VIII(C)(2)(a)(iii)). The administrative law judge has already rejected Comcast’s communication argument. *See* Section IV(B)(2)(c)(12).

The evidence of record shows that the accused X1 products satisfy this limitation. Dr. Shamos testified that a Comcast X1 local guide, running on an AX013ANC set-top box, receives

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the record message and records the selected TV program on memory within the set-top box. *See* CX-0002C (Shamos WS) at Q/A 236; *see also* CX-1697 (Xfinity DVR Cloud Video).

### (b) *Legacy System*

Rovi argues “Comcast Legacy local guide running on a Comcast Xfinity DCX3501M set-top box meets this element.” Rovi Br. at 84 (citing CX-0002C (Shamos WS) at Q/A 237). Rovi cites to hardware specifications to support its argument that “Comcast’s legacy systems store recorded programs on the set-top box.” *Id.* (citing CX-1370C (RNG-200 Hardware, Case & Packaging Spec.); CX-1288 (DCX3501-M Set-Top Datasheet); CX-1225 (DCX3501-M User Guide)). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1f also show the following elements are met by the Legacy system: ‘263 claim elements 2, 14d, 17c; ‘413 claim elements 1e; and ‘801 claim elements 1d, 1e, 5d, 5e, 10f, 10g, 15f, 15g. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the ‘413 Patent), CX-1602 (Legacy Guide Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 240, 252, 261, 273, 308, 310, 320, 322, 336, 338, 352, 354.

*Id.* at 84.

Comcast’s “communication” argument applies here. *See* Resps. Br. at 103 (Section VIII(C)(2)(b)(ii)). The administrative law judge has already rejected Comcast’s communication argument. *See* Section IV(B)(2)(c)(12).

The evidence of record shows that the accused Legacy products satisfy this limitation. A Comcast Legacy local guide running on a DCX3501M set-top box receives the record message and records the selected TV program on memory within the set-top box. *See* CX-0002C (Shamos WS) at Q/A 237.

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*b) Claims 2, 14, and 17*

The administrative law judge has determined that the accused X1 and Legacy products infringe claim 1. Neither Rovi nor Comcast presents separate, substantive argument as to whether Comcast does or does not infringe claims 2, 14, and 17. As an example, for limitation 1f (immediately above), Rovi concludes with the following sentence that refers to dependent claim 2 and independent claims 14 and 17:

The evidence and arguments made with respect to ‘263 claim element 1f also show the following elements are met by the X1 system: **‘263 claim elements 2, 14d, 17c**; ‘413 claim elements 1e; and ‘801 claim elements 1d, 1e, 5d, 5e, 10f, 10g, 15f, 15g. CX-1659 (Xfinity IPG Screenshots). CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1627, 1633, -1637 (X1 Screenshots for the ‘263 Patent); CX-1886 (Xfinity TV Remote for Google Play); CX-1887 (Xfinity TV Remote Screenshot); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 239, 252, 261, 273, 308, 310, 320, 322, 336, 338, 352, 354.

Rovi Br. at 83-84 (emphasis added).

Comcast’s arguments similarly do not distinguish between discrete claims or claim limitations. For example, Comcast identifies the three Remote Access patents in sub-headings and does not identify any claim numbers or alphanumeric claim limitations in its subsequent argument. *See* Resps. Br. at 92-97 (Sections VIII(C)(2)(a)(iii), VIII(C)(2)(a)(iv)). Two exemplary images follow:

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**iii. (263/413/801) “Communication” transmitted by the remote app is different from the “communication” received by “local guide”**

Comcast’s X1 platform does not infringe any of the asserted claims because X1 does not transmit a “communication” identifying the user-selected program from the remote guide to the local guide. The plain language of the claims requires that the communication that is sent by the “remote access interactive television program guide,” “remote guide,” or “mobile device” is the

**iv. (263/413/801) Comcast’s X1 program guide software neither records nor schedules recordings of TV programs**

Comcast’s X1 platform does not infringe any asserted claim because it does not have a local guide “recording” television programs. Every asserted claim requires that it is the local guide that records the program selected using the remote guide. RX-0850C at QA169. Rovi’s

*Id.* (highlighting added). In reply, Comcast adds:

The entirety of Rovi’s infringement analysis addresses only claim 1 of the ’263 patent. There is no analysis of any dependent claim, nor is there any analysis of any claim of the ’413 or ’801 patents. *See* Compl. PoHB at 62-84. While Respondents agree that all of the independent claims of the ’263 and ’413 patents are essentially identical and Rovi’s approach is reasonable for those five claims, Respondents do not agree this is proper for the remaining claims.

Rovi asserts, without any explanation, that the evidence presented for . . . ’263 element 1f is sufficient for ’263 dependent claim 2. Compl. PoHB at 69, 71, 76. Respondents disagree. . . . ’263 claim 2 requires that the local guide record the program on user television equipment. *See* JX-0002 (’263 patent) at 28:64-67. This feature is *not addressed* in Rovi’s discussion of ’263 element 1f. *See* Compl. PoHB at 83-84.

Resps. Reply at 27-28 (emphasis in original).

Dependent claim 2 follows: “2. The system defined in claim 1 wherein the local interactive television program guide records the television program corresponding to the selected

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program listing on the user television equipment.” JX-0002 at 28:64-67.

The evidence Rovi cites for limitation 1f is sufficient to demonstrate infringement for claim 2, and beside stating that it disagrees, Comcast has not explained (or cited any evidence demonstrating) how the accused products do not infringe. Thus, Comcast has not rebutted Rovi’s showing that claim 2 is infringed.

Accordingly, the administrative law judge finds that the accused products infringe claims 2, 14 and 17 for the same reasons they infringe claim 1.

### *c) Comcast’s Additional Non-Infringement Arguments*

Comcast argues that the accused products do not infringe because they “can be operated in many different configurations that are not accused by Rovi of infringement[.]” Resps. Br. at 86 (Section VIII(C)(2)(a)(i)). Comcast further argues that the accused products do not infringe because the “TV Go” and “TV” applications “cannot even generate a display of program listings by using a user profile[.]” *Id.* at 98-99 (Section VIII(C)(2)(a)(vi)).

#### *(1) Comcast’s Different Configurations Argument*

Comcast argues that the accused X1 and Legacy products do not infringe “any of the asserted claims of the Remote Access patents because there can be no direct infringement when an accused product can be operated in ways that are not accused of infringing the asserted claims.” Resps. Br. at 86, 103. Comcast, relying upon *Acco Brands v. ABA Locks Manufacturer Co.*, 501 F.3d 1307 (Fed. Cir. 2007), argues that non-accused modes of operation avoid infringement:

any other operation of the accused products, such as, using “favorites” to view listings (without selecting a program for recording) or selecting a program for recording from a full guide display without the “favorites” filter applied, are not accused of infringement. Given these non-accused uses, this case falls

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squarely within the *Acco Brands* decision, and Comcast does not directly infringe the claims.

Resps. Br. at 87.

Rovi replies that Comcast has misconstrued Rovi's proof of infringement and misapplied *Acco Brands*. Rovi Reply at 26-29. Rovi argues that Comcast's "argument is incorrect, ignores myriad forms of user profile information established by Rovi, and misapplies the *Acco Brands* case, which is not applicable here." *Id.* at 26. Rovi supports its argument by citing to evidence of direct infringement, by distinguishing *Acco Brands*, and by analogizing this case to *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204 (Fed. Cir. 2010) and *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358 (Fed. Cir. 2012). *Id.* at 26-28.

*Acco Brands* explains that "to prove direct infringement, a patentee must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit." 501 F.3d at 1313. The court did not find infringement because "ACCO failed to point to specific instances of direct infringement," not because there were non-accused uses, as Comcast contends. *Compare id. with* Resps. Br. at 87. Accordingly, the administrative law judge has determined that Comcast cannot avoid infringement simply because there may be alternative ways to use the accused products.

### (2) *The "TV Go" and "TV" Applications*

Comcast's entire argument is:

The "TV Go" and "TV" applications cannot infringe the "user profile" limitations of all of the asserted claims of the '263 and '413 patents because they lack the ability to filter a grid by the user's favorite channels. RX-0850C (Wigdor RWS) at Q/A 214-215; Tr. 197:19-198:1.

Resps. Br. at 98-99.



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The parties agreed that “user profile” means “user specific data at least defining preferences.” *See* Joint Outline at 4. Comcast has not sufficiently explained how lacking “the ability to filter a grid by the user’s favorite channels” is coextensive with the agreed construction such that evidence would support a non-infringement finding. Further, the evidence shows that various different types of information may constitute a user profile. *See* Rovi Reply at 29 (citing CX-0002C (Shamos WS) at Q/A 75, 81, 86, 88, 117, 158, 171, 366, and 368). Accordingly, the administrative law judge has determined that Comcast cannot avoid infringement simply because certain aspects of the accused products may lack the ability to filter a grid by a user’s favorite channels.

### 5. Indirect Infringement

#### *a) Knowledge of the ‘263 Patent and Specific Intent to Infringe*

As discussed below, Comcast’s actions indicate that it had specific intent to encourage infringement of the ‘263 Patent.

Rovi argues that Comcast has induced its suppliers:

Comcast has induced, and continues to induce, its OEMs, ARRIS and Technicolor, to directly infringe the Asserted Claims of the Asserted Patents under 35 U.S.C. § 271(b) by, among other things: (1) purchasing the accused set-top boxes from Arris and Technicolor; (2) causing the manufacture and importation of infringing devices to occur; and (3) requiring the installation of the relevant software onto the set-top boxes prior to their importation.

Rovi Br. at 87. Rovi also argues that Comcast has induced its own customers:

Comcast instructs, directs, or advises its users on how to carry out direct infringement of the asserted claims. Wigdor Tr. 876-79 (testifying that Comcast promotes, tells, and describes to its users how to use the remote recording functionality of the Comcast accused products, and not disputing that Comcast promotes the use of the X1 system, including the Xfinity Apps, in much the same way of the teachings recited in the Asserted Claims in its online promotional materials such as CX-1886 (Xfinity TV Remote for

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Google Play Store) and CX-1887 (Xfinity TV Remote for Apple App Store)); Shamos Tr. 259-62 (testifying on CX-1697 (Xfinity DVR Cloud Video) which instructs its customers on how to use the Xfinity DVR on the cloud using Comcast Xfinity Apps in a manner that Dr. Shamos has opined infringes the Asserted Claims).

*Id.* at 88.

Comcast had actual knowledge of the ‘263 Patent at least since 2014, when Comcast and Rovi held license-renewal discussions. CX-1725C (Comcast Interrog. Resp.) at 11-13; *see also* CDX-0303C (citing CX-0292C, CX-0272C, CX-1450C); RX-0860C; Resps. Br. at 112.

Comcast does not argue that it did not have knowledge of the ‘263 Patent. *See generally* Resps. Br., Section VIII(C)(3). Further, Comcast knew, or was willfully blind to the high probability that, its actions would cause its suppliers and its customers to infringe the ‘263 Patent. Comcast previously licensed the ‘263 Patent (in other words, it paid for the right to infringe it), it received claim charts articulating Rovi’s infringement allegations and did not respond to them, and it has not disclosed any exculpatory opinion of counsel despite retaining opinion counsel. *See* CX-0001C (Armaly WS) at Q/A 114 (discussing the licensed patents and the license, JX-0051C), Q/A 120-24, 129-30 (discussing claim charts); RX-0860C (Comcast’s Chief Patent Counsel’s testimonial aid showing retention of opinion counsel); *Suprema, Inc. v. Int’l Trade Comm’n*, 626 F. App’x 273, 282 (Fed. Cir. 2015) (panel remand) (affirming conclusion of specific intent where the “Commission also found that Suprema’s failure to obtain an opinion of counsel constituted an additional fact evidencing Suprema’s willful blindness.”).<sup>83</sup> Comcast also provided its customers with instructions on how to use the accused systems in an infringing manner. *See* Tr.

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<sup>83</sup> To the extent Comcast argues it relied upon an opinion of counsel, it has not shown it relied upon the opinion. *See Bose Corp. v. SDI Techs., Inc.*, 558 F. App’x 1012, 1024 (Fed. Cir. 2014) (“Without proof of good-faith reliance, possession of the opinion alone is hardly dispositive of the state of mind necessary to avoid liability.”)

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(Shamos) 259-622 (testifying on CX-1697 (Xfinity DVR Cloud Video); CX-1886 (Xfinity TV Remote for Google Play Store) and CX-1887 (Xfinity TV Remote for Apple App Store)).

Comcast's assertions that the "reasonable claim constructions" it developed during the litigation negate its pre-suit intent do not rebut the facts that support finding it had the intent to infringe Rovi's patents. Additionally, Comcast's argument, if accepted, would negate § 271(b), because almost every accused infringer can advance a reasonable claim construction or non-infringement argument. *See Certain Semiconductor Chips and Products Containing Same*, Inv. No. 337-TA-753, USITC Pub. No. 4386, Comm'n Op. at 41 (Mar. 2013) (affirming finding of induced infringement where respondents asserted "they had plausible litigation defenses" because "[m]any or most accused infringers have such plausible defenses[.]").

Finally, Comcast does not rebut Rovi's argument that it induces ARRIS and Technicolor to infringe the asserted claims by purchasing the boxes made by ARRIS and Technicolor and by causing ARRIS and Technicolor to import the accused boxes. *Compare* Rovi Br. at 87-88 (arguing that ARRIS and Technicolor "directly infringe the Asserted Claims of the Asserted Patents under 35 U.S.C. § 271(b)") *with* Resps. Br. at 106-112 (Section VIII(C)(3)) (no rebuttal is presented).

### ***b) Indirect Infringement of the '263 Patent in the United States***

#### ***(1) Comcast's Customers***

Evidence shows that Comcast's customers use the accused X1 and Legacy systems in an infringing manner in the United States.

Evidence shows that Comcast instructs, directs, or advises its users on how to carry out direct infringement of the asserted claims with the accused products. *See* Tr. 876-879 (Dr. Wigdor, testifying that Comcast promotes, tells, and describes to its users how to use the remote

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recording functionality of the Comcast accused products, and not disputing that Comcast promotes the use of the X1 system, including the Xfinity Apps, in much the same way of the teachings recited in the asserted claims in its online promotional materials such as CX-1886 (Xfinity TV Remote for Google Play Store) and CX-1887 (Xfinity TV Remote for Apple App Store)); Tr. 259-262 (Dr. Shamos, testifying on CX-1697 (Xfinity DVR Cloud Video) which instructs its customers on how to use the Xfinity DVR on the cloud using Comcast Xfinity Apps in a manner that Dr. Shamos has opined infringes the asserted claims).<sup>84</sup>

Using these applications (in connection with the X1 and Legacy set-top boxes) involves using user profile information to generate the display on the remote guide. *See* Tr. 903 (Dr. Wigdor); JX-0090C (Brown Dep. Tr.) at 65-68, 76-78, 80-82; JX-0105C (McCann Dep. Tr.) at 121-23; Tr. 251 (Dr. Shamos, describing how favorite channels, recently viewed programs, recently recorded programs, and parental control information can all be used to display television program listing on a mobile device based on user profile information). For example, CX-1696 (The X1 Platform Video), CX-0456 (X1 Entertainment Operating System Brochure), CX-1886 (Xfinity TV Remote for Google Play), CX-1887 (Screenshots - Xfinity TV Remote), CX-1890 (Set Up Recording Webpg), and CX-1894 (Xfinity TV Remote App website) all show that Comcast instructs its users to view remote interactive television program guide on the user's smartphone by using the Xfinity X1 App. CX-0002C (Shamos WS) at Q/A 179. Using this App, the user can view a remote interactive television program guide or get "recommendations just for [the specific user]." CX-1696 (The X1 Platform Video). Once the user has decided which programs to record, the app then communicates with the user's DVR over the Internet and

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<sup>84</sup> The Xfinity TV Remote App can be used with the Legacy guides. *See* CX-0002C at Q/A 219 (discussing the Legacy guide and the TV Remote App); CX-1598 (Legacy guide); CX-1781 (additional evidence pertaining to the Legacy guide).

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instructs the DVR to record the selected programming *and* displays the programs selected for recording on the remote guide generated for display to the user. *Id.* CX-1886 (Xfinity TV Remote for Google Play) shows that the Android version of the Xfinity TV Remote App had “1,000,000 to 5,000,000” installs as of October 2016. Comcast also provides instructions to its customers on using cloud-based videos and DVR. CX-1692 (How to Get Started with Cloud-Based DVR); CX-0002C (Shamos WS) at Q/A 37, 178-79.

Evidence also shows that customers utilize the Xfinity Apps the way Comcast promotes them. Tr. (Nush) 731 (agreeing that CX-1894 (Xfinity TV Remote App website) “provides and informs your users that you can schedule your DVR when you’re away from home.”). For example, Mr. Peter Nush testified at the hearing on the number of remote recording requests that occurred using the Xfinity Apps in the United States (including the TV App and Remote TV App). Tr. (Nush) 732-734. Mr. Nush confirmed CX-1515C provides usage data including numbers of recording requests that occurred for a given month using the Xfinity Apps. Tr. (Nush) 732. For example, CX-1515C (Comcast Remote Client Application Usage Data) at 4 shows that from April through August, 2016, the Xfinity TV Application had between [

] remote recording requests for a single episode. The Xfinity TV-Mobile App had between [ ] of the same requests during the same period. Similarly, CX-1515C at 4 shows that from April through August, 2016, the Xfinity TV Application had between [ ] remote recording requests for a series recording. The Xfinity TV-Mobile App had between [ ] of the same requests during the same period.<sup>85</sup>

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<sup>85</sup> Rovi argues that: “any suggestion from Comcast (or Dr. Wigdor) that the numbers of remote recordings are not limited to the accused products is wrong” because “Comcast’s Xfinity TV Remote Application does not work with *any* Samsung set-top boxes.” Rovi Br. at 89-90 (citing CX-1894 (Xfinity TV Remote App website showing set-top boxes that do not support Xfinity TV Remote app remote functionality)). Comcast critiques Rovi’s reliance on data provided by

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Mr. Nush also testified that Comcast has subscribers who use the Legacy guides and that CX-1515C includes metrics showing “whether the users have X1 or legacy (‘native’) set-top boxes[.]” RX-0839C (Nush RWS) at Q/A 38.

### (2) *Comcast’s Suppliers*

Rovi argues that Comcast induces ARRIS and Technicolor to infringe the asserted claims by purchasing the boxes made by ARRIS and Technicolor and by causing ARRIS and Technicolor to import the accused boxes. *See* Rovi Br. at 87-88 (arguing that ARRIS and Technicolor “directly infringe the Asserted Claims of the Asserted Patents under 35 U.S.C. § 271(b)”).

In reply, Comcast argues:

Rovi’s allegation that Comcast has induced the infringement of Arris & Technicolor makes no sense, as Rovi does not even allege that Arris or Technicolor directly infringe; they are only alleged to have contributorily infringed. *See* Compl. PoHB at 93-95. One cannot induce a contributory infringement. *See Limelight Networks*, 134 S.Ct. at 2117 (“where there has been no direct infringement, there can be no inducement of infringement”). Moreover, given the admissions that mobile devices are necessary for infringement (*see, e.g.*, Tr. at 170:12-23) and the fact that Arris and Technicolor only provide STBs, not mobile devices, Arris and Technicolor could not be found to have directly infringed. Thus, Rovi’s allegations that Comcast has induced their alleged infringement must fail.

Resps. Reply at 25. The asserted claims require a remote access device, which ARRIS and Technicolor do not provide. Thus, ARRIS and Technicolor do not directly infringe the ‘263 Patent.

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Peter Nush, a Comcast employee, and argues that the data does not “show” infringement because Rovi did not capture a customer using every aspect of the infringing system (*e.g.*, Rovi did not show a user making a selection from a mobile display screen). *See* Resps. Br. at 107-08. Comcast’s argument demands too much; Rovi is not required to prove its case beyond a reasonable doubt.

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Accordingly, the administrative law judge has determined that Comcast has not induced ARRIS and Technicolor to infringe the '263 Patent's asserted claims.

### c) *Contributory Infringement of the '263 Patent*

To prevail on a contributory infringement claim, a complainant must show that, *inter alia*, the accused product is “not a staple article or commodity of commerce suitable for substantial noninfringing use[.]” *See* 35 U.S.C. § 271(c); *Fujitsu*, 620 F.3d at 1326 (“To establish contributory infringement, the patent owner must show the following elements relevant to this appeal: 1) that there is direct infringement, 2) that the accused infringer had knowledge of the patent, 3) that the component has no substantial noninfringing uses, and 4) that the component is a material part of the invention.”).<sup>86</sup>

#### (1) *X1 System*

The administrative law judge has determined that Rovi has fallen short of meeting its burden of showing that the accused products have no substantial non-infringing uses; rather, the evidence shows that there are many substantial non-infringing uses of the accused set-top boxes and their corresponding ecosystem. Exemplary uses include watching television programs (*e.g.*, using the boxes with a local guide), ordering and watching pay per view programs, watching video on demand programs, or scheduling recordings through the set-top box. *See* RX-0850C (Wigdor RWS) at Q/A 85-86; Tr. 229, 838-839. Furthermore, the frequency of the use of the remote recording functionality also indicates that the infringing use is not a substantial use. *See* RX-0850C (Wigdor RWS) at Q/A 86 (“there are over 22 million Comcast subscribers and no

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<sup>86</sup> *See also* Section III(C)(2)(b) (general principles of law) and Section IV(A)(5)(b) (citing *In re Bill of Lading Transmission*, 681 F.3d at 1338; *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d at 1327; *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d at 851), *supra*.

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more than [ ] of those users remotely recorded a program”); RX-0839C (Nush RWS) at Q/A 33-56 (providing Comcast’s usage data). Thus, the administrative law judge finds that the accused ARRIS and Technicolor set-top boxes have substantial non-infringing uses, and accordingly that ARRIS and Technicolor do not contributorily infringe the ‘263 Patent.

### (2) *Legacy System*

Rovi does not advance a separate argument for the accused Legacy products. *See generally* Rovi Br., Section V(F). Comcast argues that the accused Legacy products have the same substantial non-infringing uses as the X1 products. *See generally* Resps. Br. at 114. Accordingly, the administrative law judge has determined that Rovi fell short of meeting its burden of showing that the accused Legacy products have no substantial non-infringing uses.

## 6. Domestic Industry – Technical Prong

### a) *Claim 1*

Rovi divides its analysis for claim 1 in seven claim-element subparts (1pre, 1a, 1b, 1c, 1d, 1e, and 1f). *See* Rovi Br. at 60. Each subpart is addressed below. Rovi has identified its i-Guide and Passport Systems, along with a Verizon guide, as the domestic industry products. *Id.* at 95.

Rovi also refers to the Suddenlink guide. *See* Rovi Br. at 95; Joint Outline at 7. This is the entire reference:

To the extent, [*sic*] Suddenlink practices the Asserted Patents by virtue of implementing the i-Guide, the Suddenlink products practice the Asserted Patents in the same way i-Guide practices the same. CX-1762 (Suddenlink User Reference Manual); CX-1242 (i-Guide User Reference Manual).

Rovi Br. at 95. The issue of whether the Suddenlink products practice the ‘263, ‘413, and ‘801 Patents is not listed separately in the Joint Outline. *See generally* Joint Outline at 8. The



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administrative law judge finds that Rovi has shown the Suddenlink products are sufficiently similar to the Rovi products, and that Comcast has not presented sufficient rebuttal.

(1) *Limitation 1pre*

The text for this limitation is: “A system for selecting television programs over a remote access link comprising an Internet communications path for recording, comprising[.]” *See* Rovi Br. at 62, 97.

(a) *Rovi i-Guide and Passport Systems*

Rovi argues that “Rovi’s i-Guide or Rovi’s Passport running on a [ ] set-top box, and TotalGuide xD App running on a mobile device meet this element.” *Id.* at 97 (citing CX-0002C (Shamos WS) at Q/A 387-88; CDX-0307C (CX-0002C (Shamos WS) at Q/A 383-433)) (additional exhibits are also cited)). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1pre also show that the following claim elements are met by the Rovi systems: ‘263 claim elements 14pre, 17pre; ‘413 claim elements 1pre, 10pre; and ‘801 claim elements 1pre, 1a, 5pre, 5a, 10pre, 10a, 10c, 15pre, 15a, 15c. CX-0002C (Shamos WS) at Q/A 434-35, 444-45, 452-53, 474-75, 488-89, 490-92, 504-07, 516-19, 522-23, 532-35, 538-39.

Rovi Br. at 98-99.

Comcast does not squarely address the preamble in its post-hearing brief. *See generally* Resps. Br. at 114-116 (Section VIII(D)).

Accordingly, the administrative law judge has determined that the record evidence demonstrates that the Rovi products satisfy this limitation.

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### (b) *Verizon FiOS System*

Rovi argues that [ ] and Verizon FiOS Mobile App, running on a mobile device, meet this element.” Rovi Br. at 98 (citing CX-0002C (Shamos WS) at Q/A 391). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1pre also show that the following claim elements are met by the Verizon system: ‘263 claim elements 14pre, 17pre; ‘413 claim elements 1pre, 10pre; and ‘801 claim elements 1pre, 1a, 5pre, 5a, [sic] 10pre, 10a, 10c, 15pre, 15a, 15c. CX-0002C (Shamos WS) at Q/A 434-35, 444-45, 452-53, 474-75, 488-89, 490, 495, 504-07, 516-19, 522-23, 532-35, 538-39.

Rovi Br. at 98-99.

Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

Accordingly, the administrative law judge has determined that the record evidence demonstrates that the Verizon products satisfy this limitation.

### (2) *Limitation 1a*

The text for this limitation is: “a local interactive television program guide equipment on which a local interactive television program guide is implemented, wherein the local interactive television program guide equipment includes user television equipment located within a user’s home and the local interactive television program guide generates a display of one or more program listings for display on a display device at the user’s home[.]” *See* Rovi Br. at 66, 99.

### (a) *Rovi i-Guide and Passport Systems*

Rovi argues that “Rovi’s i-Guide or Rovi’s Passport running on a [ ] set-top box meets this element.” Rovi Br. at 99 (citing CX-0002C (Shamos WS) at Q/A 393-94). Rovi further contends that “the local guide includes user television equipment, but is not limited

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to user television equipment” for the same reasons it put forth in arguing that Comcast’s products infringe. *Id.* at 100. Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 element 1a also show that the following claim elements are met by the Rovi systems: ‘263 claim elements 14a, 14b, 14c, 17a; ‘413 claim elements 1a, 10a; and ‘801 claim elements 1a, 1b, 5a, 5b, 10a, 10b, 10c, 10d, 15a, 15b, 15c, 15d. CX-0002C (Shamos WS) at Q/A 436-41, 446-47, 454-55, 476-77, 490-92, 496-97, 506-09, 518-25, 534-41.

Rovi Br. at 100.

Comcast does not squarely address this limitation in its post-hearing brief. *See generally* Resps. Br. at 114-116 (Section VIII(D)).

The evidence of record shows that the Rovi products satisfy this limitation. Dr. Shamos testified that Rovi’s i-Guide running on a [ ] set top box generates a display of TV program listings for display on a TV in the home. *See* CX-0002C (Shamos WS) at Q/A 393-94.

### (b) Verizon FiOS System

Rovi argues that the “Verizon [ ] box, running Verizon local guide, meets this element.” Rovi Br. at 100 (citing CX-0002C (Shamos WS) at Q/A 397). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1a also show the following elements are met by the Verizon system: ‘263 claim elements 14a, 14b, 14c, 17a; ‘413 claim elements 1a, 10a; and ‘801 claim elements 1a, 1b, 5a, 5b, 10a, 10b, 10c, 10d, 15a, 15b, 15c, 15d. CX-0002C (Shamos WS) at Q/A 436-41, 446-47, 454-55, 476-77, 490, 495-97, 506-09, 518-25, 534-41.

*Id.* at 100.

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Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

The evidence of record shows that the Verizon products satisfy this limitation. Dr. Shamos testified that Verizon local guide running on an [ ] set-top box generates a display of TV program listings for display on a TV in the home. *See* CX-0002C (Shamos WS) at Q/A 397; CX-1663.

### (3) *Limitation 1b*

The text for this limitation is: “a remote program guide access device located outside of the user’s home on which a remote access interactive television program guide is implemented, wherein the remote program guide access device is a mobile device, and wherein the remote access interactive television program guide[.]” *See* Rovi Br. at 71, 101.

#### (a) *Rovi i-Guide and Passport Systems*

Rovi argues that “Rovi’s i-Guide or Rovi’s Passport running on a [ ] set-top box, and TotalGuide xD App running on a mobile device meet this element.” Rovi Br. at 101 (citing CX-0002C (Shamos WS) at Q/A 399-400). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1b also show the following elements are met by the Rovi systems: ‘263 claim elements 14c, 17b; ‘413 claim elements 1a, 10a, 10b; and ‘801 claim elements 1a, 5a, 10a, 10c, 15a, 15c. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 454-55, 476-79, 490-92, 506-07, 518-19, 522-23, 534-35, 538-39.

*Id.* at 101.

Comcast does not dispute that the Rovi products meets this limitation. *See generally* Resps. Br., Section VIII(D) (this limitation is not addressed).

The evidence of record shows that the Rovi products satisfy this limitation. As Dr. Shamos testified, a mobile device running Rovi’s i-Guide or Rovi’s Passport running on a

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[ ] set-top box, and TotalGuide xD App running on a mobile device meet this element, constitutes the claimed remote program guide access device located outside of the user's home. *See* CX-0002C (Shamos WS) at Q/A 399-400.

### *(b) Verizon FiOS System*

Rovi argues that a “mobile device, running Verizon FiOS Mobile App, meets this element.” Rovi Br. at 101 (citing CX-0002C (Shamos WS) at Q/A 403). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1b also show the following elements are met by the Verizon system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1a, 10a, 10b; and ‘801 claim elements 1a, 5a, 10a, 10c, 15a, 15c. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 454-55, 476-79, 490, 495, 506-07, 518-19, 522-23, 534-35, 538-39.

*Id.* at 102.

Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

The evidence of record shows that the Verizon products satisfy this limitation. Dr. Shamos testified that a mobile device running Verizon FiOS Mobile App constitutes the claimed remote program guide access device located outside of the user's home. *See* CX-0002C (Shamos WS) at Q/A 403.

### *(4) Limitation 1c*

The text for this limitation is: “generates a display of a plurality of program listings for display on the remote program guide access device, wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device[.]” *See* Rovi Br. at 72, 102.

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(a) *Rovi i-Guide and Passport Systems*

Rovi argues that the “Rovi’s i-Guide or Rovi’s Passport running on a [ ] and TotalGuide xD App running on a mobile device meet this element.” Rovi Br. at 102 (citing CX-0002C (Shamos WS) at Q/A 405-06).

Rovi argues that the purchased channel lineups, favorite channels, and recording schedule indicators (*i.e.*, the red dot used to denote a recording has been scheduled) form the foundation of a user profile. *See id.* Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1c also show the following elements are met by the Rovi systems: ‘263 claim elements 14c, 17b; ‘413 claim elements 1b, 1c, 3, 5, 9, 10b, 10c, 10d, 14, 18; ‘801 claim elements 1a, 5a, 10a, 10c, 10d, 15a, 15c. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 456-59, 464-66, 470-73, 478-87, 490-92, 506-07, 518-19, 522-25, 534-35, 538-39.

*Id.* at 103.

Comcast’s entire argument for the “generates a display” limitations is:

Rovi has not shown that the DI remote guides generate displays using user profiles and that users use those generated displays to select a program for recording. Tr. 239:24-240:22. This is the same issue as with infringement. RX-0850C a Q/A 78, 233.

Resps. Br. at 115. Comcast also argues:

All of the asserted claims of the ‘263 and ‘413 patents require that favorite channel lists (the asserted user profiles) be used somewhere other than on the remote device to generate a display based on the favorite channels. *Id.* at Q/A 239. Rovi has not provided evidence that the profiles are used at these other locations to generate a guide and so has failed to demonstrate a DI tech prong. Tr. 240:23-242:3; *see also* RX-0850C at Q/A 241.

Resps. Br. at 115-16.

The evidence of record shows that the Rovi products satisfy this limitation. Dr. Shamos testified that Rovi’s i-Guide or Rovi’s Passport running on a [ ] set-top box,

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and TotalGuide xD App running on a mobile device meet this element. *See* CX-0002C (Shamos WS) at Q/A 405-06.

*(b) Verizon FiOS System*

Rovi argues that the “Verizon FiOS Mobile App, running on a mobile device, meets this element.” Rovi Br. at 103 (citing CX-0002C (Shamos WS) at Q/A 409). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1c also show the following elements are met by the Verizon system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1b, 1c, 3, 5, 9, 10b, 10c, 10d, 14, 18; ‘801 claim elements 1a, 5a, 10a, 10c, 10d, 15a, 15c. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 456-59, 464, 469-73, 478-87, 490, 495, 506-07, 522-25, 534-35, 538-39.

Rovi Br. at 103.

Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

The administrative law judge has determined that the Verizon products meet this limitation. *See* CX-0002C (Shamos WS) at Q/A 409.

*(5) Limitation 1d*

The text for this limitation is: “receives a selection of a program listing of the plurality of program listings in the display, wherein the selection identifies a television program corresponding to the selected program listing for recording by the local interactive television program guide[.]” *See* Rovi Br. at 77, 104.

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(a) *Rovi i-Guide and Passport Systems*

Rovi argues that “Rovi’s i-Guide or Rovi’s Passport running on a [ ] set-top box, and TotalGuide xD App running on a mobile device meet this element.” Rovi Br. at 104 (citing CX-0002C (Shamos WS) at Q/A 411-12). Rovi adds:

. . . The TotalGuide xD App receives a user’s selection of a program listing from the TV Listings screen. The user may tap the program listing for “America’s Court With Judge Ross” airing at 1:30 PM on channel 9, KCAL. CX-1595 (i-Guide Screenshots for the ‘801 Patent) at 1-11 is exemplary of a selection for recording being observed at both the local and remote guide (*e.g.*, “Harry”). This is further illustrated by CX-1610 (Passport Screenshots for the ‘801 Patent); CX-1163C (Passport Server Operation and Main Guide), CX-1662 (Rovi IPG Screenshots); CX-1591 (i-Guide Screenshots for the ‘263 Patent); CX-1592 (i-Guide Screenshots for the ‘413 Patent); CX-1595 (i-Guide Screenshots for the ‘801 Patent); CX-1607 (Passport Screenshots for the ‘263 Patent); CX-1608 (Passport Screenshots for the ‘413 Patent); CX-1610 (Passport Screenshots for the ‘801 Patent); CDX-0307C (CX-0002C (Shamos WS) at Q/A 383-433).

*Id.* Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1d also show the following elements are met by the Rovi systems: ‘263 claim elements 14c, 17b; ‘413 claim elements 1b, 1c, 10c, 10d; and ‘801 claim elements 1b, 5b, 10b, 10d, 15b, 15d. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 456-59, 480-83, 496-97, 508-509, 520-21, 524-25, 536-37, 540-41.

*Id.* at 104.

Comcast argues:

As discussed above for infringement, all of the asserted claims require that the guide software must initiate the recordings or scheduling of recordings. *Id.* at Q/A 237. But Rovi has not presented any source code or other evidence that would demonstrate that the guide software initiates the recordings or scheduling of recordings. Doing so requires a source code analysis or equivalent evidence, none of which has been provided. *Id.* at Q/A 238.



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Resps. Br. at 115.<sup>87</sup>

The evidence of record shows that the Rovi products satisfy this limitation. Dr. Shamos testified that Rovi's i-Guide or Rovi's Passport running on a [ ] set-top box, and TotalGuide xD App running on a mobile device receives a show selection from programs listed in the app, for recording by the local guide. *See* CX-0002C (Shamos WS) at Q/A 411-12.

(b) *Verizon FiOS System*

This is Rovi's argument:

The Verizon FiOS Mobile App, running on a mobile device, meets this element. CX-0002C (Shamos WS) at Q/A 415. For example, the Verizon FiOS Mobile App receives a user's selection of a program listing from the TV Listings screen. The user may tap the program listing for "Copper Chef" to record. CX-1621 (Verizon FiOS Screenshots for the '263 Patent); CX-1663 (Verizon FiOS IPG Screenshots); CDX-0307C (CX-0002C (Shamos WS) at Q/A 383-433).

Rovi Br. at 104-05. Rovi concludes with the following:

The evidence and arguments made with respect to '263 claim element 1d also show the following elements are met by the Verizon system: '263 claim elements 14c, 17b; '413 claim elements 1b, 1c, 10c, 10d; and '801 claim elements 1b, 5b, 10b, 10d, 15b, 15d. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 456-59, 481-83, 496-97, 508-509, 520-21, 524-25, 536-37, 540-41.

*Id.*

Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

The evidence of record shows that the Verizon products satisfy this limitation. Dr. Shamos testified that the Verizon FiOS Mobile App, running on a mobile device receives a show

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<sup>87</sup> Comcast does not point toward any evidence that would support its no-domestic industry arguments. *See* RX-0850C (Wigdor RWS) at Q/A 237-38.

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selection from programs listed in the app, for recording by the local guide. *See* CX-0002C (Shamos WS) at Q/A 415.

### (6) *Limitation 1e*

The text for this limitation is: “transmits a communication identifying the television program corresponding to the selected program listing from the remote access interactive television program guide to the local interactive television program guide over the Internet communications path[.]” *See* Rovi Br. at 80, 105.

### (a) *Rovi i-Guide and Passport Systems*

Rovi argues that “Rovi’s i-Guide or Rovi’s Passport running on a [ ] set-top box, and TotalGuide xD App running on a mobile device meet this element.” Rovi Br. at 105 (citing CX-0002C (Shamos WS) at Q/A 417-18). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1e also show the following elements are met by the Rovi systems: ‘263 claim elements 14c, 17b; ‘413 claim elements 1d, 10d; and ‘801 claim elements 1c, 5c, 10e, 15e. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 460-61, 482-83, 498-99, 510-11, 526-27, 542-43.

*Id.* at 105-06.

Comcast’s entire argument, which relies on its reading of “communication,” is:

As discussed above for infringement, under either construction, all of the asserted claims require that the communication sent by the remote guides is the same as the communication received by the local guide. *Id.* at Q/A 235. But Rovi has not presented any evidence that would demonstrate that the transmitted “communication” is the same as the “communication” received at the STB and Rovi has not demonstrated that anything other than the STB would be the “local guide,” even under its overbroad interpretation of its incorrect construction.

Resps. Br. at 115.

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The evidence of record shows that the Rovi products satisfy this limitation. Dr. Shamos testified that the TotalGuide xD App, running on a mobile device, transmits a communication, *e.g.*, a message, that identifies the selection, via the internet. *See* CX-0002C (Shamos WS) at Q/A 417-18.

### *(b) Verizon FiOS System*

Rovi argues that the “Verizon FiOS Mobile App, running on a mobile device, meets this limitation.” Rovi Br. at 106 (citing CX-0002C (Shamos WS) at Q/A 421). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1e also show the following elements are met by the Verizon system: ‘263 claim elements 14c, 17b; ‘413 claim elements 1d, 10d; ‘801 claim elements 1c, 5c, 10e, 15e. CX-0002C (Shamos WS) at Q/A 440-41, 448-49, 460-61, 482-83, 498-99, 510-11, 526-27, 542-43.

Rovi Br. at 107.

Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

The evidence of record shows that the Verizon products satisfy this limitation. Dr. Shamos testified that the Verizon FiOS Mobile App, running on a mobile device, transmits a communication, *e.g.*, a message, that identifies the selection, via the internet. *See* CX-0002C (Shamos WS) at Q/A 421.

### *(7) Limitation 1f*

The text for this limitation is: “wherein the local interactive television program guide receives the communication and records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment[.]” *See* Rovi Br. at 83, 106.

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### (a) *Rovi i-Guide and Passport Systems*

Rovi argues that the “Rovi’s i-Guide or Rovi’s Passport running on a [ ] and TotalGuide xD App running on a mobile device meet this element.” Rovi Br. at 106 (citing CX-0002C (Shamos WS) at Q/A 423-24). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1f also show the following elements are met by the X1 system: ‘263 claim elements 2, 14d, 17c; ‘413 claim elements 1e; and ‘801 claim elements 1d, 1e, 5d, 5e, 10f, 10g, 15f, 15g. CX-1659 (Xfinity IPG Screenshots). CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1627, 1633, -1637 (X1 Screenshots for the ‘263 Patent); CX-1886 (Xfinity TV Remote for Google Play); CX-1887 (Xfinity TV Remote Screenshot); CX-1634, -1638 (X1 Screenshots for the ‘413 Patent); CX-1636, -1641 (X1 Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 239, 252, 261, 273, 308, 310, 320, 322, 336, 338, 352, 354.

*Id.* at 107.

Comcast’s “communication” argument applies here. *See* Resps. Br. at 92 (Section VIII(C)(2)(a)(iii)). The administrative law judge has already rejected Comcast’s communication argument. *See* Section IV(B)(2)(c)(12).

The evidence of record shows that the Rovi products satisfy this limitation. Dr. Shamos testified that a Rovi i-Guide or Passport running on a [ ] and TotalGuide xD App running on a mobile device, receives the record message and records the selected TV program on memory within the set-top box. *See* CX-0002C (Shamos WS) at Q/A 423-24.

### (b) *Verizon Fios System*

Rovi argues that a “Verizon local guide, running on a [ ] set-top box, meets this element.” Rovi Br. at 107 (citing CX-0002C (Shamos WS) at Q/A 427). Rovi

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cites to photographs evidencing that the system records a selected program. *See* CX-1621

(recording “Copper Chef”). Rovi concludes with the following:

The evidence and arguments made with respect to ‘263 claim element 1f also show the following elements are met by the Verizon system: ‘263 claim elements 2, 14d, 17c; ‘413 claim elements 1e; and ‘801 claim elements 1d, 1e, 5d, 5e, 10f, 10g, 15f, 15g. CX-0002C (Shamos WS) at Q/A 428, 433, 442-43, 450-51, 462-63, 500-03, 512-15, 528-31, 544-47.

*Id.* at 107.

Comcast does not present separate argument for the Verizon products. *See* Resps. Br., Section VIII(D).

The evidence of record shows that the Verizon products satisfy this limitation. Dr. Shamos testified that a Verizon local guide, running on an [

] *See* CX-0002C (Shamos WS) at Q/A 427.

***b) Comcast’s Additional Critiques***

***(1) Comcast’s “Meager Proof” Argument***

Comcast’s entire argument on this point is:

For nearly every element of the Verizon products, Rovi’s expert offers only screenshots as the alleged proof that an element is met. Such proof may be enough to show that a guide is displayed on the screen of either a TV or a mobile device, but it is no substitute for a source code or schematic analysis showing where and how the guide is generated, where the program listings came from, where the favorite lists (if any) are stored, and so on. This meager proof fails to carry Rovi’s burden to prove that the asserted claims read on the DI products.

Resps. Br. at 114-15.

Comcast’s unsupported argument does not provide any evidentiary basis to rule in its favor. While Dr. Wigdor opined that “proving that it is the guide software that is scheduling

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those recordings requires a source code analysis, which Dr. Shamos has not provided,” Comcast did not point toward any evidence that would support its non-infringement and no-domestic industry arguments. *See* RX-0850C (Wigdor RWS) at Q/A 237-38.

### (2) Comcast’s Patent Marking Argument

Comcast argues that “Patent marking confirms Rovi products do not practice the ‘263, ‘413, and ‘801 patents.” Resps. Br. at 116. Comcast’s entire argument for this point is:

Rovi technical manuals and documents contain a patent marking notice, which never includes the ‘263, ‘413, or ‘801 patents. *See, e.g.,* RX-0091C.0001; RX-0106C.0033; RX-0125C.0002.

*Id.*

A complainant is not required to mark its product to prevail on the domestic industry’s technical prong. *See* 19 U.S.C. § 1337. Indeed, 35 U.S.C. § 287 itself indicates marking is optional: “Patentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented . . . .” Thus, the administrative law judge declines to find that “patent marking confirms Rovi products do not practice the ‘263, ‘413, and ‘801 patents.”

## 7. Patent Eligibility

Under step one of the *Alice* framework, Comcast argues:

The asserted claims of the Remote Access Patents are directed to the abstract idea of setting a recording on a local guide from a remote guide via communication over the Internet. For example, claim 1 of the ‘263 Patent, which is representative recites four basic steps:

1. generating displays of program listings using a local or remote program guide (which may be based on a user profile);

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2. receiving a user selection of a program to record on a remote device;
3. transmitting that user selection over the Internet to the local guide on user television equipment; and
4. recording the selected program on the user television equipment in response to the received communication.

These steps are purely functional descriptions of using conventional equipment to implement the idea of setting a recording on a local guide from a remote guide via communication over the Internet. For example, the claims recite using entirely conventional equipment such as local interactive television program guide equipment (e.g., a STB and television), a remote program guide access device (e.g., mobile phone), and conventional program guides running on that equipment. . . .

Resps. Br. at 160-61. Comcast further argues that the provisional applications for the '263, '413, and '801 patents indicate that the inventions are an “abstract idea implemented functionally on known technology.” *Id.* at 161-62.

Under step two of the *Alice* framework, Comcast argues that the asserted claims do not contain an inventive concept:

[the asserted claims] do not require any specific hardware or equipment for practicing the claims, but simply and generically recite conventional “interactive program guides,” “local interactive television program guides,” “remote interactive television program guides,” “remote devices,” “mobile devices,” and a “remote link.” RX-0007C (Wigdor WS) at Q/A 105-114.

Resps. Br. at 164. Comcast contends the specification “discloses nothing novel” apparatus-wise.

*Id.* at 164-65. Comcast then addresses many recent § 101 cases. *Id.* at 165-66.

Rovi argues:

The asserted claims of the '263, '413, and '801 Patents recite a variety of specific techniques to enable IPG users for the first time to use a local guide in communication with a remote guide to identify and schedule recording of programs and to generate a display of program listings on the remote guide based on the program guide information displaying on the local guide. This

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innovation is a distributed enhancement comparable to the distributed enhancement the Federal Circuit emphasized in finding claims patent-eligible in *AmDocs*. The asserted claims are directed to a specific technological improvement of a specific technological system, and they are patent-eligible under *Alice*. . . .

Rovi Br. at 128. Rovi then expands on this overview and discusses several recent cases. *Id.* at 128-132.<sup>88</sup>

In reply, Comcast argues that Rovi did not directly address Comcast's abstract-idea argument and that Rovi's comparison to *Enfish* overstates Rovi's contribution to the art. Resps. Reply at 49-50.

Rovi replies that Comcast's arguments ignore claim limitations, does not consider the claim limitations in an ordered combination, and that Comcast has failed to argue preemption. Rovi Reply at 44-46.

### *a) Alice Step One: Abstract Idea*

The administrative law judge finds that the asserted claims are directed toward an abstract idea. Here, in summary, claim 1 pertains to:

- 1) Generating program listings on a home television, via the local guide;
- 2) Generating program listings based on a user profile, on a remote device, via a remote guide;
- 3) Receiving a program selection, at the remote device;
- 4) Transmitting the program selection to the local guide;
- 5) Recording the selected program with local equipment.

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<sup>88</sup> The cases discussed include *Bascom Glob. Internet Servs. Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1327 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2015); and *AmDocs (Israel) Limited v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016).



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While certain language and limitations add a degree of particularity to claim 1, the predominant concept embodied in claim 1 relates to scheduling a recording from a remote device. This is an abstract idea, devoid of a concrete or tangible application. See *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (“The process of receiving copyrighted media, selecting an ad, offering the media in exchange for watching the selected ad, displaying the ad, allowing the consumer access to the media, and receiving payment from the sponsor of the ad all describe an abstract idea, devoid of a concrete or tangible application. Although certain additional limitations, such as consulting an activity log, add a degree of particularity, the concept embodied by the majority of the limitations describes only the abstract idea of showing an advertisement before delivering free content.”); see also *Netflix, Inc. v. Rovi Corp.*, 114 F. Supp. 3d 927, 937 (N.D. Cal. 2015) (finding interactive program guide claims “directed to the abstract idea of filtering search results using selectable categories” ineligible), *aff’d*, No. 2015-1917, 2016 WL 6575091 (Fed. Cir. Nov. 7, 2016) (Fed. Cir. R. 36); *Tech. Dev. & Licensing, LLC v. Gen. Instrument Corp.*, No. 07-cv-4512, 2016 WL 7104253, at \*4-5 (N.D. Ill. Dec. 6, 2016) (finding claims directed toward a television control system for accessing favorite channels lists was an abstract idea); *Broadband iTV, Inc. v. Hawaiian Telcom, Inc.*, 136 F. Supp. 3d 1228, 1237 (D. Haw. 2015) (finding patent directed to using “hierarchical ordering based on metadata to facilitate the display and locating of video content” in an electronic program guide was an abstract idea), *aff’d*, No. 2016-1082, 2016 WL 5361570 (Fed. Cir. Sept. 26, 2016).

### ***b) Alice Step Two: Inventive Concept***

“An inventive concept that transforms the abstract idea into a patent-eligible invention must be significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer.” *Bascom Glob. Internet Servs., Inc. v.*

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*AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016); *see also Alice*, 134 S. Ct. at 2357.

“The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. . . . an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Bascom*, 827 F.3d at 1350; *see also Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1304 (Fed. Cir. 2016) (“Although some of the components and functions may appear generic, several limitations are individually unconventional (e.g., completing depends upon distributed enhancing) and the overall ordered combination of all of the limitations was unconventional. It produced the advantage over the prior art by solving the technological problem at stake.”). In analyzing patent-eligibility, courts have analogized representative claims to those adjudicated in prior cases. *See Amdocs*, 841 F.3d at 1295 (“We begin, then, with an examination of eligible and ineligible claims of a similar nature from past cases.”).

The administrative law judge has determined that Comcast has not met its burden of demonstrating that the patents are directed toward ineligible subject matter.<sup>89</sup>

As an initial matter, Comcast does not substantively compare claim 1 of the ‘263 Patent to any claims from cases finding patent-ineligibility. *Compare* Resps. Br., Section VIII(E)(7) (this section does not compare the asserted claims to any cases) *with* Section X(E)(1) (this section compares the challenged claims to cases finding ineligibility).

Rovi, on the other hand, draws an analogy between the challenged claims and *Bascom*. *See* Rovi Br. at 130-132 (Rovi also draws analogies to *Enfish*, *AmDocs*, *McRO*, *DDR Holdings*, and *Bascom*). In *Bascom*, the Federal Circuit identified that the patent-eligible inventive concept was “the installation of a filtering tool at a specific location, remote from the end-users, with

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<sup>89</sup> The administrative law judge finds Comcast has not met its burden under both the preponderance-of-the-evidence and clear-and-convincing standards.

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customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server.”

*Bascom*, 827 F.3d at 1350. Comcast’s attempt to distinguish *Bascom* focuses solely on *Bascom*’s procedural posture and does not engage with the actual comparison. *See* Resps. Br. at 166. Additionally, with regard to the ‘263, ‘801, and ‘463 Patents, Comcast does not address *AmDocs*, *McRO* or *DDR Holdings* in its post-hearing brief or reply.

Second, although Comcast successfully argues that the generic and conventional “interactive program guides,” “local interactive television program guides,” “remote interactive television program guides,” “remote devices,” “mobile devices,” and a “remote link,” *see* Resps. Br. at 164-66, it does not fully address “the key question [of] whether the claims add something to the abstract idea so that the patent covers a specific application of the abstract idea, rather than the idea itself.” *Netflix v. Rovi*, 114 F. Supp. 3d at 937 (citing *Accenture Global Services, GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013)); *Bascom*, 827 F.3d at 1350 (“The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art.”). Here, the particular arrangement of claimed elements involves generating program listings on a remote device, based on a user profile stored away from the remote device, receiving a program selection from that user-specific list, and transmitting the selection to prompt a recording by the local guide, on local equipment. *See* JX-0002 at 17:37-47 (disclosing using a user profile and data filtering “to limit the amount of data provided . . . to minimize the bandwidth requirements[.]”) This is more than using a remote device and the internet for remote recording, as Comcast argues. Accordingly, the administrative law judge has determined that Comcast has not met its burden of demonstrating that the ‘263 Patent lacks an inventive concept.

**8. Validity**

Comcast contends that four different references anticipate the ‘263 Patent’s asserted claims. *See* Resps. Br. at 116-154 (Section VIII(E)). The four references are Kondo, Blake, Shteyn, and Sato. *Id.* Comcast also argues that the ‘263 Patent’s asserted claims are obvious, and it presents prior art combinations involving the four anticipatory references in combination with Kondo with Killian, Dedrick, and Young. *Id.* Comcast then argues that the asserted claims are indefinite “hybrid” claims and that the claims are directed to ineligible subject matter. *Id.*

**a) Anticipation**

**(1) Kondo (RX-0245)**

Comcast’s overview of its Kondo argument concludes with the following:

The only features that are even arguably missing from Kondo are the use of “user profiles” to create the display on the remote guide (for the ‘263 Patent and ‘413 patent) and providing program guide information to the remote guide from the local guide (for the ‘801 patent). These features, however, even if not explicitly disclosed by Kondo, were well known in the relevant art and would have been obvious to apply to the system of Kondo, as explained below.

Resps. Br. at 117.

Rovi succinctly argues:

Dr. Wigdor provides no opinion or evidence that the Kondo reference discloses (expressly or inherently) his summarized claim limitations of (a) remote guide implemented on a mobile device, RX-0007C (Wigdor WS) at Q/A 251; (b) user profile information received over the Internet, *id.* at Q/A 258, 279; (c) obtains user profile in response to a user input, *id.* at Q/A 282; and (d) obtains guide data based on the user profile, *id.* at 284.

Rovi Br. at 112.<sup>90</sup> Thus, Rovi disputes that Kondo discloses subject matter teaching limitations 1b and 1c.

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<sup>90</sup> RX-0007C (Wigdor WS) at Q/A 279, 282 pertain to dependent claims.

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For the “remote guide implemented on a mobile device” limitation (1b), Dr. Wigdor testified:

**Q251. How, if at all, were the “remote guide implemented on a mobile device” limitations taught by Kondo?**

A251. Given the teachings of Kondo showing a terminal TA1 outside the home (RX-0245 at paragraph 0015), it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to implement the remote program guide access device (“TA1”) in a mobile device such as a laptop computer.

RX-0007C. Dr. Wigdor’s testimony, which pertains to obviousness, does not support Comcast’s anticipation argument because it applies the wrong legal standard. Dr. Wigdor’s testimony at Q/A 258, 279, 282, 284 suffers from the same defect. Accordingly, Comcast has not shown that Kondo anticipates claim 1 of the ‘263 Patent.

(2) *Blake (RX-0269)*

Comcast’s overview of its Blake argument concludes with the following:

The only claimed features that are even arguably missing from Blake are the “user profiles” to create the display on the remote guide (for the ‘263 Patent and ‘413 patent) and providing program guide information to the remote guide from the local guide (for the ‘801 patent). These features, however, even if not disclosed by Blake, were well known in the relevant art and would have been obvious to apply to the system of Blake, as explained below.

Resps. Br. at 134.

Rovi succinctly argues:

Dr. Wigdor provides no opinion or evidence that the Blake reference discloses (expressly or inherently) his summarized claim limitations of (a) user profile received over the Internet, RX-0007C (Wigdor WS) at Q/A 338; (b) obtains user profile in response to a user input, *id.* at Q/A 339; and (c) obtains guide data based on the user profile, *id.* at Q/A 340.

Rovi Br. at 114.

For the “user profile received over [the] Internet” limitation (1e), Dr. Wigdor testified:

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**Q338. How, if at all, were the “user profile received over Internet” limitations anticipated or rendered obvious?**

A338. This additional limitation would have been obvious to a person of ordinary skill in the art as of the date of invention asserted by Rovi in view of Killian. In discussing these limitations above, I’ve already described how they were taught by Killian in A281. Given those teachings, it would have been obvious to a person of ordinary skill in the art at the time to have provided the user profiles taught by Killian, Dedrick, and/or Rzeszewski to the terminals of Blake over the Internet.

RX-0007C. Dr. Wigdor’s testimony, which pertains to obviousness, does not support Comcast’s anticipation argument because it applies the wrong legal standard. Dr. Wigdor’s testimony at Q/A 339, 340 suffers from the same defect. Accordingly, Comcast has not shown that Blake anticipates claim 1 of the ‘263 Patent.

(3) *Shteyn (RX-0265)*

Rovi succinctly argues:

Dr. Wigdor provides no opinion or evidence that the Shteyn reference teaches his summarized claim limitations of (a) generates a display based on program guide information received from the local guide, RX-0007C (Wigdor WS) at Q/A 382; (b) user profile received over Internet, *id.* at Q/A 386; (c) obtains user profile in response to a user input, *id.* at Q/A 387; and (d) obtains guide data based on the user profile, *id.* at Q/A 388.

Rovi Br. at 116.

For the remote guide “generates a display . . . based on a user profile . . .” limitation (1c),

Dr. Wigdor testified:

**Q382. How if at all, were the “remote guide generates a display based on program guide information received from the local guide” limitations taught by the prior art under a proper view of the claim scope?**

A382. Under a proper view of the scope of the claims, this limitation would have been obvious to a person of ordinary skill in the art on the date of invention asserted by Rovi in view of a combination of Shteyn and Humpleman.

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RX-0007C. Dr. Wigdor's testimony, which pertains to obviousness, does not support Comcast's anticipation argument because it applies the wrong legal standard. Dr. Wigdor's testimony at Q/A 386-88 suffers from the same defect. Accordingly, Comcast has not shown that Shteyen anticipates claim 1 of the '263 Patent.

(4) *Sato (RX-0264)*

Rovi succinctly argues:

Dr. Wigdor provides no opinion or evidence that Sato teaches his summarized claim limitations of (a) user profile received over Internet, RX-0007C (Wigdor WS) at Q/A 450; (b) obtains user profile in response to a user input, *id.* at Q/A 451; or (c) obtains guide data based on the user profile, *id.* at Q/A 452.

Rovi Br. at 118-19.

For the "user profile received over [the] Internet" limitation (1e), Dr. Wigdor testified:

**Q450. How, if at all, were the "user profile received over Internet" limitations anticipated or rendered obvious?**

A450. This additional limitation would have been obvious to a person of ordinary skill in the art as of the date of invention asserted by Rovi in view of Killian. In discussing these limitations above, I've already described how they were taught by Killian in A281. Given those teachings, it would have been obvious to a person of ordinary skill in the art at the time to have provided the user profiles taught by Killian, Dedrick, and/or Rzeszewski to the terminals of Sato over the Internet.

RX-0007C. Dr. Wigdor's testimony, which pertains to obviousness, does not support Comcast's anticipation argument because it applies the wrong legal standard. Dr. Wigdor's testimony at Q/A 451-52 suffers from the same defect. Accordingly, Comcast has not shown that Sato anticipates claim 1 of the '263 Patent.

*b) Obviousness*

Comcast presents numerous obviousness arguments based on at least four primary references, Kondo, Blake, Shteyn, and Sato. *See* Resps. Br. at 116-154 (Section VIII(E)).<sup>91</sup>

*(1) Comcast Provides Insufficient Rationale for Combining the Many Obviousness Arguments it Presents*

Rovi argues that the administrative law judge should not find the patents obvious because Comcast did not present evidence that the identified primary references could be combined with any other reference to meet any asserted claim limitation. For example, for the Kondo combinations, Rovi argues:

Dr. Wigdor did not provide explicit opinions on why Kondo could be combined with any other reference to render obvious his summarized claim limitations of (a) remote guide implemented on a mobile device; (b) user profile information received over the Internet; (c) obtains user profile in response to a user input; and (d) obtains guide data based on the user profile that Rovi has identified as missing expressly and inherently from the disclosure of Kondo. CX-1901C (Shamos RWS) at Q/A 75.

Rovi Br. at 113 (Section V(H)(2)(d)(iii)). The same argument is repeated for combinations involving Blake, Shteyn, and Sato. *See id.*, Sections V(H)(2)(e)(iii) (Blake), V(H)(2)(f)(iii) (Shteyn), V(H)(2)(g)(iii) (Sato), and V(H)(2)(i) (critiquing every combination).

Comcast replies that it has “provided specific reasons for each combination and Rovi *never addresses the substance of these arguments*, such as explaining why a POSITA would not have applied the user profiles of Killian to other similar systems.” Resps. Reply at 46 (emphasis in original). The testimony Comcast cites, RX-0007C at Q/A 455-65, however, identifies two

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<sup>91</sup> The Examiner used Blake as the basis for a rejection, and Rovi disclosed most of the references used in Comcast’s obviousness combinations during prosecution. *See generally* JX-0002; JX-0009 (‘263 Patent’s file history).



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references and then applies them to multiple prior-art-combination permutations. For example,

Dr. Wigdor testified:

**Q455. Why would a person of ordinary skill in the art at the time have combined the teachings the references you discuss in this Witness Statement?**

A455. A person of ordinary skill in the art at the time would have had a multitude of reasons to combine the teachings of Kondo, Blake, Shteyn, Mizuno or Sato, on the one hand, with

Young, Humpleman, Killian, Dedrick, and/or Rzeszewski, on the other, including explicit and implicit reasons.

...

**Q457. What would a person of ordinary skill in the art have understood based on this teaching?**

A457. This teaching of Shteyn would have motivated a person of ordinary skill in the art to combine references that taught improvements in program guide networking (like Kondo, Blake, Shteyn, Mizuno, Sato, or Humpleman) with other improvements in program guides that made use of user profiles like Killian, Dedrick, and Rzeszewski.

RX-0007C.

The administrative law judge has determined that Comcast has failed to meet its burden of proving invalidity with clear and convincing evidence. *See Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95 (2011).

The Supreme Court has explained that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Numerous Federal Circuit decisions have followed this principle.<sup>92</sup> Vague and inarticulate expert testimony does

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<sup>92</sup> *Accord Probatte Sports, LLC v. Sports Tutor, Inc.*, No. 2016-1800, 2017 WL 785644, at \*3 (Fed. Cir. Mar. 1, 2017) (after citing *KSR*, the Federal Circuit explained that “[i]n the district court, Sports Tutor did not adduce expert testimony or even present attorney argument on why

not provide the rational underpinning to support a conclusion of obviousness. *See InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014) (in finding that the defendant failed to meet its burden of proving invalidity by clear and convincing evidence, the Federal Circuit noted that the defendant's expert's testimony "was vague and did not articulate reasons why a person of ordinary skill in the art at the time of the invention would combine these references."); *ActiveVideo Networks*.<sup>93</sup>

Dr. Wigdor's testimony, RX-0007C at Q/A 455-65, does not sufficiently explain why a person of ordinary skill in the art would have applied the multitude of asserted references—at least five primary references (including Mizuno), five secondary references, and two additional

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one of skill would have been motivated to combine dynamic braking with the other prior art references directed to pitching machines. Accepting Sports Tutor's argument would essentially eliminate the motivation to combine requirement and essentially turn an obviousness analysis into an anticipation analysis."); *Purdue Pharma L.P. v. Depomed, Inc.*, 643 F. App'x 960, 965 (Fed. Cir. 2016) (in affirming a Patent Trial and Appeal Board decision finding that the IPR petitioner had not demonstrated the challenged claims were not patentable, the Federal Circuit stated that "a patent challenger must demonstrate that a skilled artisan would have had reason to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success from doing so."); *Tinnus Enterprises, LLC v. Telebrands Corp.*, 846 F.3d 1190, 1207 (Fed. Cir. 2017) (in affirming a non-obviousness finding, the Federal Circuit stated that "[a]bsent a motivation to combine, Telebrands' remaining obviousness arguments are unavailing."); *see also Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) ("Where, as here, the necessary reasoning is absent, we cannot simply assume that 'an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.'").

<sup>93</sup> In *ActiveVideo Networks*, the Federal Circuit affirmed the grant of a JMOL that reversed jury's finding of obviousness after finding that the expert's "testimony is generic and bears no relation to any specific combination of prior art elements. It also fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does*." *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (emphasis in original). The insufficient expert testimony was: "The motivation to combine would be because you wanted to build something better. You wanted a system that was more efficient, cheaper, or you wanted a system that had more features, makes it more attractive to your customers, because by combining these two things you could do something new that hadn't been able to do before." *Id.* at 1328.

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references (Young and Lawler)—to arrive at any one, particular, discrete combination of references.

(2) *Comcast's Primary References, Kondo (RX-0245), Blake (RX-0269), Shteyn (RX-0265), and Sato (RX-0264), Do Not Inherently Teach a "Remote IPG Display Based on Profile" (Limitation 1c)*

For all obviousness combinations, Comcast argues that the "Remote IPG Display Based on Profile" (limitation 1c) "was either inherent . . . or would have been obvious" over all of the combinations. *See* Resps. Br. at 122 (Kondo), 136 (Blake), 143 (Shteyn), 150 (Sato).<sup>94</sup>

Rovi argues that "Dr. Wigdor provides inherency arguments as to his summarized claim limitations of (a) remote guide generates a display of program listings and (b) remote guide generates a display based on remotely stored user profile. . . . Dr. Wigdor does not provide any evidence that either of these summarized limitations is necessarily present in the reference." Rovi Br. at 113.<sup>95</sup>

The administrative law judge has determined that Comcast has failed to meet its burden of proving invalidity with clear and convincing evidence. *See Microsoft v. i4i*, 564 U.S. at 95.

Although inherency is traditionally an anticipation doctrine, it "may supply a missing claim limitation in an obviousness analysis." *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1194-95 (Fed. Cir. 2014). However, inherency "must be carefully circumscribed in the context of obviousness." *Id.* at 1195. The Federal Circuit has explained that inherency

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<sup>94</sup> Comcast acknowledges: "These issues are substantively the same as discussed above in connection with the Kondo reference." Resps. Br. at 137, 143, 150.

<sup>95</sup> The full text of Comcast's and Dr. Wigdor's "remote guide generates a display based on remotely stored user profile" summarized limitation is: "wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device." *See* RX-0007C at Q/A 104. Within the context of claim 1, it is the "remote access interactive television program guide" that must display the program listings based on the user profile. *Id.*; (JX-0002 at 28:42-43).

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may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. If, however, the disclosure is sufficient to show that *the natural result flowing* from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

*Id.* (quoting *In re Oelrich*, 666 F.2d 578, 581 (C.C.P.A. 1981) (emphasis added in *PAR Pharm.*)).

Here, Dr. Wigdor's inherency arguments rely on an inventor's deposition testimony pertaining to the Take3 application and "the XD" to opine that "all cable systems" generate "a display based on remotely stored user profile." RX-0007C at Q/A 258-59. Neither Comcast nor Dr. Wigdor indicates if the deponent was shown Kondo, Blake, Shteyn, or Sato or asked questions eliciting information that would show whether these references, which are the foundation of Comcast's obviousness challenge, inherently disclose information teaching the relevant claim limitation. Accordingly, Comcast has not shown that the "disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function." *PAR Pharm.*, 773 F.3d at 1194-95.

(3) *Kondo (RX-0245, in view of Killian (RX-0262))*

Comcast argues Killian discloses "the use of user profiles to generate displays of program listings." Resps. Br. at 124.

Rovi's entire argument about Killian is:

Killian does not disclose a remote guide. CX-1901C (Shamos RWS) at Q/A 49. The guide of Killian receives program information over the Internet, but no recording instructions are conveyed over the Internet. *Id.* Therefore, Killian does not disclose a "system for selecting television programs over a remote access link comprising an Internet communications path" because no selection of a program is communicated over the Internet.

*See* Rovi Br. at 120.

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Dr. Wigdor, Comcast's expert, testified, as follows:

**Q265. What does Killian disclose with respect to the use of user profiles to generate displays of program listings?**

A265. Killian taught generating a listing of programs ("schedule") based on a "viewer profile" and program listing information. See RX-0262 at 2:5-11:

The electronic programming guide includes a profile database that stores a viewer profile and a suggest module that is coupled to the profile database. The suggest module accesses the viewer profile and the program listing information and, in response, generates a preferred schedule according to the viewer profile and the program listing information.

RX-0007C. The evidence shows that Killian teaches the use of user profiles recited in limitation 1c. See RX-0007C at Q/A 265; RX-0262 at 2:5-11. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Kondo and Killian.<sup>96</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

(4) *Kondo (RX-0245), in view of Killian (RX-0262), and further in view of Dedrick (RX-0258)*

With regard to Dedrick, Comcast argues that "Dedrick disclosed permanently storing a user profile on a removable storage device, that is, somewhere other than on the device providing the guide, when it was not in use." Resps. Br. at 125.

For Dedrick, Rovi argues:

Dedrick does not disclose any program guide, or the use of a profile in generating a program guide, and certainly does not

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<sup>96</sup> The Supreme Court has explained that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Numerous Federal Circuit decisions have followed this principle. *Accord Probatton Sports, Purdue Pharma, Tinnus Enterprises, InTouch Techs., ActiveVideo Networks, and Plantronics, supra.*

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disclose selecting a program for recording using a remote access link comprising an Internet communication. CX-1901C (Shamos RWS) at Q/A 55. The only reference to “television” in Dedrick is that a television set is one of the possible devices that can be metered. RX-0258 (Dedrick) at col. 3, lns. 14-16, col. 5, lns. 26-29. There is no teaching that anything displayed on the television would be affected or influenced by a user profile. *Id.*

Rovi Br. at 121.

Dr. Wigdor, Comcast’s expert, testified, as follows:

**Q268. What does Dedrick disclose with respect to the use of user profiles to generate displays of program listings?**

A268. Dedrick disclosed permanently storing the user profile on a removable storage device, that is, somewhere other than the device, when it was not in use. For example, Dedrick taught a “personal profile database” containing “user profile data,” which could be stored on a removable nonvolatile storage device. *See* RX-0258, Dedrick at 6:22-50:

In one embodiment, the information in personal profile database 27 is protected from access by anyone other than the individual who is associated with the information. For example, the information may be protected on a computer by encrypting the profile when it is not in use. Alternatively, the information may be stored on a removable nonvolatile storage device, such as a PCMCIA Flash memory card. Thus, an individual may remove the Flash-based profile card from a computer and thereby remove the risk of exposure of private information to other individuals operating in the network system 10. In addition, since the profile is removable, individual end users can move a profile from computer to computer, such as between office and home.

In yet another embodiment, a portion of the user and profile information may be stored on a removable nonvolatile storage device, such as a smart card. Although the smart card has limited storage space, it is a much more inexpensive alternative as compared to a PCMCIA flash memory card. Minimum user information such as user name, address, telephone number and user password may be stored in the smart card. Other user profile information may be retrieved from a user profile server upon access by a user via the smart card. The accessed user profile information may then be transmitted back to the computer in an encrypted form and stored the PC’s volatile memory. Any user profile information which has been changed by the user may be

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transmitted back to the network system 10 and the personal profile may then be updated with the new information.

RX-0007C.

The evidence shows that Dedrick discloses storing user profiles remotely, as recited in limitation 1c. *See* RX-0007C at Q/A 268; RX-0258 at 6:22-50. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Kondo, Killian, and Dedrick.<sup>97</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

(5) *Blake (RX-0269), in view of Killian (RX-0262)*

The administrative law judge previously determined that Killian taught user profilers as recited in limitation 1c. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Blake and Killian.<sup>98</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

(6) *Blake (RX-0269), in view of Killian (RX-0262), and further in view of Dedrick (RX-0258)*

The administrative law judge previously determined that Killian and Dedrick taught user profilers as recited in limitation 1c. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Blake, Killian, and Dedrick.<sup>99</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

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<sup>97</sup> *See* n.92, *supra*.

<sup>98</sup> *See* n.92, *supra*.

<sup>99</sup> *See* n.92, *supra*.

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(7) *Shteyn (RX-0265), in view of Killian (RX-0262)*

The administrative law judge previously determined that Killian taught user profilers as recited in limitation 1c. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Shteyn and Killian.<sup>100</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

(8) *Shteyn (RX-0265), in view of Killian (RX-0262), and further in view of Dedrick (RX-0258)*

The administrative law judge previously determined that Killian and Dedrick taught user profilers as recited in limitation 1c. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Shteyn, Killian, and Dedrick.<sup>101</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

(9) *Sato (RX-0264), in view of Killian (RX-0262)*

The administrative law judge previously determined that Killian taught user profilers as recited in limitation 1c. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Sato and Killian.<sup>102</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

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<sup>100</sup> See n.92, *supra*.

<sup>101</sup> See n.92, *supra*.

<sup>102</sup> See n.92, *supra*.



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(10) *Sato (RX-0264), in view of Killian (RX-0262) and Dedrick (RX-0258)*

The Joint Outline presents a combination based on Sato, Killian, and Dedrick. *See* Joint Outline at 8. Comcast's brief does not clearly present this distinct combination. *See generally* Resps. Br. at 149-53. To the extent that this is a separate argument, the administrative law judge finds that Comcast has fallen short of its burden for this particular combination for the same reasons articulated based on the combinations involving (1) Sato and Killian (discussed immediately above) and (2) Sato, Killian, Young, and Dedrick (discussed immediately below).

(11) *Sato (RX-0264), in view of Killian (RX-0262), and further in view of Young (RX-0253) and Dedrick (RX-0258)*

For the combination of Sato, Killian, Young, and Dedrick, Comcast references Young in relation to limitation 1b. *See* Resps. Br., Section VIII(E)(4)(b)(ii) (limitation 1b is the only limitation where Young is mentioned). Comcast argues:

... a POSITA, when using portable computer 107 to control the computer and video recorder 11 in the home would have used an electronic IPG on portable computer 11 to allow for the selections of programs for recording, either based on this teaching of Sato or based on Young, which taught the advantages of IPGs long before the Remote Access Patents. *Id.* Thus, it would have been obvious to use the claimed remote IPG on computer 107. *See* RX-0007C (Wigdor WS) at Q/A 424.

Resps. Br. at 150.

Rovi references Young in its motivation-to-combine arguments. *See* Rovi Br. at 124 (“Young does not disclose responding to a communication from a remote guide to a local guide. Dr. Wigdor offers no explanation why one of skill in the art, even if motivated to combine Sato with Young, would have combined them to yield any Asserted Claim.”).

Accordingly, to the extent Sato does not teach limitation 1b, the administrative law judge finds that Young teaches the remote guide recited in limitation 1b. For the combination of Sato,

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Killian, and Young and/or Dedrick, the administrative law judge previously determined that Killian and Dedrick taught user profilers as recited in limitation 1c. However, as explained in Section IV(B)(7)(c)(1), above, Comcast has not provided sufficient rationale for combining Sato, Killian, and Young and/or Dedrick.<sup>103</sup> Accordingly, the administrative law judge finds that Comcast has not shown, through clear and convincing evidence, that claim 1 would have been obvious.

### *(12) Secondary Considerations for the '263, '801, and '413 Patents*

Rovi argues that the '263, '801, and '413 Patents were a commercial success and that a long-felt need both support its argument that the patents are not obvious. *See* Rovi Br. at 124-25.

Comcast argues that the evidence does not support Rovi's arguments and that "there is evidence of simultaneous conception of the asserted claims, which confirms that the claims would have been obvious to a POSITA." *Resps. Br.* at 155.

#### *(a) Commercial Success*

Rovi argues:

Products that embody the '263, '413, and '801 Patents, including Comcast's infringing devices, have been commercially successful. CX-1905C (Putnam RWS) at Q/A 113. Comcast made \$21.526 billion in 2015 from the Accused Products, which are used by more than 22 million Comcast subscribers in the United States. CX-0811C (Rovi Commercial Success Charts); CX-0816C (Rovi U.S. Subscribers Chart). There is a nexus of the invention to the success of these embodying products. Comcast itself must believe that its remote recording feature influences consumer purchasing decisions, as Comcast has widely advertised the feature. . . . Comcast advertises the remote recording capability with a feature video. CX-1697 (Xfinity DVR Cloud Video). A narrator proclaims: "You can even schedule new shows to record and

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<sup>103</sup> *See* n.92, *supra*.

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download your DVR recordings to watch anywhere, even when you're off line. It's simple." *Id.*

Rovi Br. at 126-27.

Comcast argues:

Rovi has failed to demonstrate a nexus between the alleged commercial success of the products and the asserted claims. Rovi's reliance upon alleged praise for the '263, '413, and '801 patents fails. The patentees did not invent remote recording. *See* RX-0850C (Wigdor RWS) at Q/A 74-75. Yet all of the cited evidence discusses remote recording generally, not the specific narrow inventions recited in the asserted claims. *See* Tr. 1259:12-1260:12. Thus, it fails to demonstrate a nexus.

Resps. Br. at 155 (Comcast does not dispute the monetary values Rovi presents).

The administrative law judge has determined that Rovi has made a showing that the '263 Patent and the '413 Patents were commercially successful, although the showing is weak. As Rovi has not shown that any products infringe or practice the '801 Patent, the administrative law judge finds that Rovi cannot demonstrate that patent was a commercial success.<sup>104</sup>

For the nexus requirement, the Federal Circuit has explained that

A nexus between commercial success and the claimed features is required. . . . However, if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus. . . . The presumed nexus cannot be rebutted with mere argument; evidence must be put forth.

*Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000) (citations omitted). Here, the evidence shows that the Comcast products have enjoyed financial success and that the guides embodied the claimed features. *See* CX-1905C (Putnam RWS) at

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<sup>104</sup> In the alternative, if it is later found that the Comcast or domestic industry products practice or infringe the '801 Patent, then the evidence shows that the '801 Patent also has had weak commercial success, as the products have enjoyed financial success and the corresponding guides embodied the claimed features.

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Q/A 113; *see generally* CX-1903C (Dr. Delp opines that various guides incorporate the patented features). The advertising evidence, CX-1697, also supports Rovi's arguments. *See also* CX-1905C (Putnam RWS) at Q/A 123-25.

However, Rovi's showing is weak because it has not shown that its success is not due to other factors, such as advertising and marketing or "other economic and commercial factors unrelated to the quality of the patented subject matter." *See In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (rejecting argument where patentee did not explain "that the product was purchased due to the claimed features"); *In re DBC*, 545 F.3d 1373, 1384 (Fed. Cir. 2008). In particular, Rovi has not shown that browse mode drove consumer purchasing decisions rather than other factors (such as demand for cable television itself).

Accordingly, the administrative law judge finds that while Rovi has shown that the '263 and 413 Patents were commercially successful, that showing is weak.

### *(b) Licensing Success*

The Federal Circuit specifically requires "affirmative evidence of nexus where the evidence of commercial success presented is a license, because it is often cheaper to take licenses than to defend infringement suits." *In re Cree*, 818 F.3d at 703 (quotations omitted). The Federal Circuit has explained that

When the specific licenses are not in the record, it is difficult for the court to determine if "the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons."

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*Id.* (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1294 (Fed. Cir. 2012)).<sup>105</sup> In general, the existence of a license alone is insufficient to show that the licensed patent was a commercial success. See *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (“Without a showing of nexus, “the mere existence of ... licenses is insufficient to overcome the conclusion of obviousness” when there is a strong *prima facie* case of obviousness.”); see also *Amazon.com*, 2016 WL 1170773 at \*17 (“Mr. Holtzman’s testimony lists patent family licenses and revenue, but does not discuss the merits of the challenged claim as they relate to any particular license for the ‘956 patent in the portfolio of licenses. . . . [this] does not establish whether a specific license (or licensing clause, etc.) for the ‘956 patent occurred because of the merits of the challenged claim, the merits of unchallenged claims, for other patented inventions, or for other economic reasons related to the whole ‘956 patent family.”).

The evidence shows that Rovi [ ] CX-0001C at Q/A 28, 31 (Rovi and licensees “[

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<sup>105</sup> In *Antor Media*, 689 F.3d at 1294, the Federal Circuit criticized evidentiary support that is similar to the present investigation:

Antor merely lists the licensees and their respective sales revenue. The licenses themselves are not even part of the record. Antor provides no evidence showing that the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons. The Board was thus correct in holding that the existence of those licenses is, on its own, insufficient to overcome the *prima facie* case of obviousness.

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] *See id.* at Q/A 35-36; CX-1905C (Putnam RWS) at Q/A 67, 69-70.<sup>106</sup>

The evidence does not show, however, that these licenses are based on the merits of the patents as opposed to a business decision to avoid litigation, a prior business relationship, or other economic reason. *See In re Cree*, 818 F.3d at 703; *In re Antor Media*, 689 F.3d at 1294.

[  
] Accordingly, the administrative law judge has determined that Rovi has not shown that licensing of these patents—apart from the portfolio—has been a success.

### (c) *Long-Felt Need*

Rovi's entire argument is:

The '263, '413, and '801 Patents' claims fulfilled a long-felt need for an IPG that permitted interaction with a remote IPG. The inventions claimed in the '263, '801, and '413 Patents improved the user experience, such as by remotely browsing available programs and selecting a program to be recorded. CX-1904C (Williams RWS) at Q/A 103.

Rovi Br. at 254. Mr. Williams's testimony follows:

**Q102: What conclusions, if any, did you come to regarding the obviousness of the '263, '413, and '801 Patents?**

A102: I concluded that secondary considerations support non-obviousness of the '263, '413, and '801 patents.

**Q103: How did you come to this conclusion?**

A103: For one, I considered Rovi's contentions. I understand that Rovi contends that the '263, '801, and '413 Patents' claims fulfilled a long-felt need for an IPG that permitted interaction with a remote IPG, as, for example, the prior art required that the user be

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<sup>106</sup> It is not readily apparent whether the licenses are in the record or if Dr. Putnam read them. *See generally* CX-1905C (Putnam RWS) at Q/A 75-79.

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physically present in the home to access important program guide features such as program recording. I also understand that Rovi contends that by providing a user with access to an interactive program guide at a remote location, the inventions claimed in the '263, '801, and '413 Patents improved the user experience, such as by remotely browsing available programs and selecting a program to be recorded.

### **Q104: What is your opinion as to these contentions?**

A104: I agree with these contentions and they are consistent with my experience. Setting up one's tuner and VCR for recording was a cumbersome process even from within the home. The difficulty of ensuring that one recorded the pop-up show or the one that they forgot about while away from home was quite difficult. With the transition to digital PayTV set-top boxes and DVRs, growing Internet connectivity, and the present inventions, these long-felt needs could be finally solved.

CX-1904C at Q/A 102-04.

Long-felt need "is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem." *Texas Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

Rovi's evidence consists of conclusory expert testimony. *See, e.g.*, CX-1904C (Williams RWS) at Q/A 102-04. Mr. Williams did not identify the date when the long-felt need first began (*i.e.*, Mr. Williams did not analyze the need "as of the date of an articulated identified problem and evidence of efforts to solve that problem," per *Texas Instruments*).<sup>107</sup> *Id.*

Accordingly, the administrative law judge has determined that this testimony is insufficient to find a long-felt need, and that this factor does not support non-obviousness.

### *(d) Contemporaneous Invention by Others*

Comcast argues:

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<sup>107</sup> While Mr. Williams discussed the 1992, 1998, and 1999 timeframes, those discussions were not cited by Rovi, and the discussions relate to the priority dates of the patents, not the dates when the alleged need arose.

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. . . there is evidence of independently made, simultaneous inventions, made within a comparatively short space of time, which is evidence that the asserted claims were obvious to those of ordinary skill in the art at the time. As discussed above, there were a number of practitioners in the art who developed IPG systems with remote recording and user profile features around this time. The existence of all of this simultaneous development confirms that the asserted claims would have been obvious to a person of ordinary skill at that time. See RX-0007C (Wigdor WS) at Q/A 480.

Resps. Br. at 288.

The administrative law judge has determined that Comcast's contemporaneous inventions argument provides only negligible support for a finding of obviousness. While the prior art Comcast cites is close, the combinations do not clearly and convincingly evidence simultaneous invention in such a manner that has a perceptible impact on the obviousness calculus.

### *(e) Weighing the Secondary Consideration Factors*

On the whole, the administrative law judge has determined that Rovi's weak showing of commercial success provides weak support for finding that the '263 and '413 Patents are not obvious. The evidence cited by Comcast is negligible and does not have a perceptible impact on the obviousness calculus.

### *c) Indefiniteness*

Comcast argues:

Claims 1 and 14 of the '263 Patent, claim 1 of the '413 patent, and claims 10 and 15 ('Asserted System Claims') are invalid for indefiniteness because each of these claims recite elements of an apparatus and a method for using that apparatus. . . . A single claim that recites both a system and the method for using that system is invalid under 35 U.S.C. § 112 because it does not apprise a POSITA of its scope. See *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005).

Resps. Br. at 158.



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Rovi argues:

. . . The use of a “gerund (*e.g.*, transmitting, receiving)” with an apparatus claim does not inherently make the claim indefinite. *See Certain Network Devices, Related Software & Components Thereof*, Order No. 13, USITC Inv. No. 337-TA-944 (July 28, 2015) (Shaw, ALJ). And, as the Federal Circuit articulated, “apparatus claims are not necessarily indefinite for using functional language” and “if an apparatus claim is clearly limited to a[n] apparatus possessing the recited structure and capable of performing the recited functions, then the claim is not invalid as indefinite.” *UltimatePointer, LLC v. Nintendo Co., Ltd.*, 816 F.3d 816, 826 (Fed. Cir. 2016) (internal quotations omitted). . . .

Rovi Br. at 108.

The administrative law judge has determined that claims 1 and 14 of the ‘263 Patent, claim 1 of the ‘413 patent, and claims 10 and 15 of the ‘801 patent are not indefinite “hybrid” claims. The phrases that Comcast identifies modify the claimed systems rather than activities of a user. *See UltimatePointer, L.L.C. v. Nintendo Co.*, 816 F.3d 816, 826 (Fed. Cir. 2016) (“If an apparatus claim is clearly limited to an apparatus possessing the recited structure and capable of performing the recited functions, then the claim is not invalid as indefinite.” (citation and quotation-alteration brackets omitted); *see also HTC Corp. v. IPCom GmbH & Co., KG*, 667 F.3d 1270, 1277 (Fed. Cir. 2012) (finding claims not indefinite where the limitations established “the underlying network environment in which the mobile station operates.”). Thus, the administrative law judge finds that the challenged claims are not indefinite hybrid claims.

### **C. U.S. Patent No. 8,046,801**

#### **1. Overview of the ‘801 Patent (JX-0003)**

The ‘801 Patent, entitled “Interactive television program guide with remote access,” issued on October 25, 2011. The ‘801 Patent is a continuation of U.S. Patent Application No. 09/354,344, and it claims the benefit of U.S. Provisional Application No. 60/097,527, filed

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August 21, 1998, and U.S. Provisional Application No. 60/093,292, filed July 17, 1998. The ‘801 Patent shares “essentially the same specification” as the ‘263 Patent and the ‘413 Patent. *See* Resps. Br. at 63; *see also* Rovi Br. at 41 (explaining the patents “stem from a common, parent application filed on July 16, 1999”). The ‘801 Patent relates to interactive television guide programs that operate on local devices, such as a set-top box, and remote devices, such as a laptop or mobile phone.

### 2. Claim Construction

#### *a) Level of Ordinary Skill in the Art*

The parties address the level of ordinary skill for the ‘263, ‘801, and ‘413 Patents together. *See* Rovi Br. at 42; Resps. Br. at 70.

The administrative law judge already determined that a person having ordinary skill in the relevant art would have a bachelor’s degree in computer science, electrical engineering, computer engineering, or a similar discipline and two to four years of experience or familiarity with computer networks, graphical user interfaces, and the associated computer software. *See* Section IV(B)(2)(a).

#### *b) Disputed Claim Terms*

##### *(1) Recording by the local guide*

The phrase “recording by the local guide” appears only in the claims (*i.e.*, claims 1, 5, 10, 15, 19, 23, 28, 33, 37, 41, 46, and 51). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
recording by the local interactive television program guide equipment on which the local interactive television program guide is implemented	Comcast does not clearly present a construction in its post-hearing brief.

*See* Rovi Br. at 52; Resps. Br. at 79-81.

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Rovi's argument, which is comingled with three other disputed phrases, follows:

One of ordinary skill in the art would agree with Rovi's proposed construction—"recording by the local interactive television program guide equipment on which the local interactive television program guide is implemented." CX-0002C (Shamos WS) at Q/A 121, 123. As discussed above at Sections V(C)(2)(b)-(d), there is no geographic limitation regarding the local guide. Rovi's construction for this term is consistent with its use in the specifications of the Patents. See JX-0002 ('263 Patent) at col. 11, lns. 4-44, col. 12, lns. 10-13, col. 17, lns. 48-50, col. 24, lns. 36-39.

As with the "local" interactive television program guide term, Respondents' proposed construction again imposes a geographical limitation by limiting the recording to being "initiated" by the local interactive program guide (which in turn, according to Respondents, must be located solely inside a user's home). Resps. P.H. Br. at 196-98. The word "initiates" does not appear anywhere in the intrinsic record of the Patents. Moreover, there is no requirement that the equipment within the users' home initiate the recording as Respondents' construction would require. Within the claims, it is: (a) the user of the remote guide who requests a recording; (b) the remote guide which communicates the recording request to the local guide; and (c) the local guide which records the television program. See CX-0002C (Shamos WS) at Q/A 122 (explaining additional intrinsic evidence in support of Rovi's construction). Respondents are improperly attempting to introduce causal and geographical limitations into the claims.

Rovi Br. at 53-54.

Comcast's entire argument, which is comingled with five other disputed phrases, follows:

Comcast's proposed constructions are consistent with the intrinsic evidence. In every embodiment disclosed in the patent specification, it is the guide software that initiates the recording. See, e.g., JX-0002 ('263 Patent) at 12:19-22, 17:54-59, 24:36-39, and 24:44-51. This repeated aspect of the specification is recognized in Comcast's proposed constructions.

Rovi takes issue with the word "initiates" in Comcast's constructions and argues that the *remote guide* could also be said to "initiate" a recording when it remotely requests a recording. See, e.g., CX-0002C (Shamos WS) at Q/A 122. While it is true that the remote guide communicates a scheduling request, in every embodiment in the patent it is the *local guide* which receives this

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request from the remote guide and it is the *local guide* that actually initiates the recording. *See, e.g.*, JX-0002 at 12:19-22, 17:54-59, 24:36-39, and 24:44-51.

Rovi's constructions, on the other hand, do nothing more than rearrange the words of the limitation and, therefore, do not explain their meaning. Further, for the "recording by [a/the] local interactive television program guide," limitation Rovi inserts the concept of the local guide *equipment* to a limitation that otherwise did not contain it. By inserting the local guide equipment into this construction, Rovi excludes an embodiment described in the specification where the local guide records a program on a program guide server. *See id.* at 24:44-51.

Furthermore, by changing the claim term to only require that equipment perform the recording, Rovi would remove the local guide entirely from the process of recording. In other words, under Rovi's construction, the *local guide* need not be involved at all in the recording, only the *equipment* on which the local guide is implemented. This changes the meaning of the claim term.

Resps. Br. at 79-81.<sup>108</sup>

Comcast replies, for all of the "recording terms," as follows:

Respondents' constructions merely clarify what is clear from the claims: the *local guide*, not something else, records the programs. Each of the claims recites either "recording by the local guide" or "records ... using the local interactive television program guide." This plain language mandates a construction that it is the local guide that initiates the recordings.

Rovi has no meaningful response and instead alleges that Respondents are attempting to re-litigate the "inside a user's home" issue with these proposed constructions. *See* Compl. PoHB

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<sup>108</sup> The six terms to which this argument applies are: "(1) 'recording by [a / the] local interactive television program guide,' (2) 'records the television program corresponding to the selected program listing responsive to the communication using the local interactive television program guide equipment,' (3) 'records the television program corresponding to the selected television program listing using the local interactive television program guide equipment,' (4) 'recording by the local guide,' (5) 'responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment,' and (6) 'responsive to the communication, schedules the program corresponding to the selected program listing for recording at the appropriate time using the television equipment' [which] are provided in RDX-0839 to RDX-0841.'").

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at 53-54. That is untrue. Respondents only litigate the issue regarding the proper meaning of “local guide” / “local interactive television program guide” once. If Respondents prevail, then of course the meaning of “local guide” / “local interactive television program guide” in these recording terms would have that same meaning. But if Respondents do not prevail, there is not a separate argument with these constructions that the local guide must be in the user’s home. The issue with these constructions is whether the *local guide* (wherever it may be) performs the recordings. On that issue, Rovi presents no meaningful response.

Resps. Reply at 21.

The administrative law judge construes “recording by the local guide” to mean “recording by the local interactive television program guide equipment on which the local interactive television program guide is implemented.” Comcast has not presented a cogent argument, with sufficient intrinsic (Comcast does not cite the ‘801 patent or its prosecution history) or extrinsic support, to warrant construing the phrase otherwise.

(2) *Responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment*

The phrase “responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment” appears only in claims 1 and 5 of the ‘801 patent. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
responsive to the communication, scheduling for recording by the user equipment, using the local guide, the program corresponding to the selected program listing	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 56; Resps. Br. at 79-81.

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Rovi's entire argument for this phrase and the "responsive to the communication, schedules the program corresponding to the selected program listing for recording at the appropriate time using the television equipment" phrase is:

One of ordinary skill in the art would agree with Rovi's proposed construction—"responsive to the communication, scheduling for recording by the user equipment, using the local guide, the program corresponding to the selected program listing." CX-0002C (Shamos WS) at Q/A 135. Rovi's construction simply rearranges the phrases in the term itself making the intent of the original claim language easier to understand. CX-0002C (Shamos WS) at Q/A 136 (explaining additional intrinsic evidence in support of Rovi's construction). Rovi's construction is also supported by the specification of the Patents. JX-0003 ('801 Patent) at col. 38, lns. 29-33, col. 20, lns. 32-46. As with the "recording by the local guide terms," Section V(C)(2)(h), *supra*, Respondents' proposed construction improperly introduces the vague concept of "initiates" together with the geographical limitation of where that "initiation" occurs into the term.

Rovi Br. at 56.

Comcast does not brief this phrase separately. Resps. Br. at 79-80 (this is one of the six comingled arguments). In reply, Comcast adds:

The issues for these two terms are the same as the issues for the recording terms, which is why Respondents briefed all six together. *See* Resp. PoHB at 79-81.

Resps. Reply at 22.

The administrative law judge construes "responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment" to mean "responsive to the communication, scheduling for recording by the user equipment, using the local guide, the program corresponding to the selected program listing." The construction provides additional context for understanding the phrase without enlarging or narrowing the claim scope. Comcast has not presented a cogent argument, with

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sufficient intrinsic (Comcast does not cite the ‘801 patent or its prosecution history) or extrinsic support, to warrant construing the phrase otherwise.

- (3) *Responsive to the communication, schedules the program corresponding to the selected program listing for recording at the appropriate time using the television equipment*

The phrase “responsive to the communication, schedules the program corresponding to the selected program listing for recording at the appropriate time using the television equipment” appears only in claims 10 and 15 of the ‘801 patent. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
responsive to the communication, schedules the program corresponding to the selected program listing for recording at an appropriate time using the television equipment	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 56; Resps. Br. at 79-81.

Neither Rovi nor Comcast brief this phrase separately. See Rovi Br. at 56 (this phrase is briefed with the “responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment” phrase); Resps. Br. at 79-80 (this is one of the six comingled arguments).

In reply, Comcast adds:

The issues for these two terms are the same as the issues for the recording terms, which is why Respondents briefed all six together. See Resp. PoHB at 79-81.

Resps. Reply at 22.

The administrative law judge previously construed “responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for

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recording by the user equipment” to mean “responsive to the communication, scheduling for recording by the user equipment, using the local guide, the program corresponding to the selected program listing.”

Accordingly, the administrative law judge construes the phrase “responsive to the communication, schedules the program corresponding to the selected program listing for recording at the appropriate time using the television equipment” to mean “responsive to the communication, schedules the program corresponding to the selected program listing for recording at an appropriate time using the television equipment.”

### (4) *Program guide information*

The term “program guide information” appears throughout the claims and the specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
information necessary for remotely providing program guide functionality	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 55; Resps. Br. at 84.

Rovi’s entire argument follows:

One of ordinary skill in the art would agree with Rovi’s proposed construction—“information necessary for remotely providing program guide functionality.” CX-0002C (Shamos WS) at Q/A 127. This construction comes directly from the specification of the Patents. JX-0003 (‘801 Patent) at col. 15, lns. 33-41; *see also* CX-0002C (Shamos WS) at Q/A 129 (explaining additional intrinsic evidence in support of Rovi’s construction).

Rovi Br. at 55.

Comcast’s entire argument follows:

The party’s [*sic*] proposed construction [*sic*] of “program guide information” are [*sic*] provided in RDX-0845. Comcast acknowledges that Rovi has pulled its construction directly from



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the specification, but the description Rovi relies on is for one particular embodiment where the local and remote program guides are sharing the same program guide information to enable the remote guide to remotely schedule a recording. Those of ordinary skill in the art would recognize that “program guide information” is also used by the local guide to generate a display that allows a user to locally schedule a program for recording whether or not there is a remote guide in the system. *See* RX-0007C (Wigdor WS) at Q/A 197. Thus, the word “remotely” in Rovi’s construction improperly narrows the plain and ordinary meaning of “program guide information” to apply only to remote devices.

Resps. Br. at 84.

Comcast replies:

Program guide information can be used by either a local or a remote guide to provide program guide functionality. When used by a local guide, Rovi’s construction would be nonsensical as the program guide information is necessary, but it is used to provide program guide functionality *locally*, not *remotely* as required by Rovi’s constructions.

Resps. Reply at 22.

The administrative law judge construes “program guide information” to mean “information necessary for remotely providing program guide functionality.” The construction provides additional context for understanding the phrase without enlarging or narrowing the claim scope. Comcast has not presented a cogent argument, with sufficient intrinsic (Comcast does not cite the ‘801 patent or its prosecution history) or extrinsic support, to warrant construing the phrase otherwise.

### (5) *Remote server*

The term “remote server” appears throughout the claims and the specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
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Rovi's Proposed Construction	Comcast's Proposed Construction
server that provides program guide information	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 55; Resps. Br. at 84.

Rovi's entire argument follows:

One of ordinary skill in the art would agree with Rovi's proposed construction—"server that provides program guide information." CX-0002C (Shamos WS) at Q/A 133. This construction is based on the specifications. JX-0003 ('801 Patent) at col. 3, lns. 34-38. The term "remote server" is used to refer to "program guide server 25" or "server 242" or "server 256" because no other servers are mentioned in the '801 specification. CX-0002C (Shamos WS) at Q/A 133 (explaining additional intrinsic evidence in support of Rovi's construction). All three of those servers, according to the specifications, provide program guide information. *Id.*

Rovi Br. at 55.

Comcast's entire argument follows:

The party's [*sic*] proposed construction [*sic*] of "remote server" are [*sic*] provided in RDX-0846. There is no need to construe this limitation. Those of ordinary skill in the art would know that a remote server is a server that is located somewhere else. RX-0007C (Wigdor WS) at Q/A 200. This conclusion is also clear from the plain language of the claims. *Id.* at Q/A 202.

Resps. Br. at 84.

Comcast replies:

There is no need to construe this term and Rovi has not demonstrated why construction is necessary or helpful.

Resps. Reply at 22.

The administrative law judge construes the term "remote server" to mean "server that provides program guide information." The construction provides additional context for understanding the phrase without enlarging or narrowing the claim scope. Comcast has not

presented a cogent argument, with sufficient intrinsic (Comcast does not cite the ‘801 patent or its prosecution history) or extrinsic support, to warrant construing the phrase otherwise.

### 3. Literal Infringement

Rovi asserts claims 1, 5, 10, and 15. Rovi Br. at 42. Rovi relies upon the same evidence and argument presented for claim 1 of the ‘263 Patent to argue that claims 1, 5, 10, and 15 are infringed. *See generally* Rovi Br., Section V(E)(1). For instance, the conclusion of Rovi’s argument for the preamble of claim 1 of the ‘263 Patent is typical for its allegations that the X1 and Legacy products infringe the ‘801 patent:

The evidence and arguments made with respect to ‘263 claim element 1pre also show that the following claim elements are met by the Legacy system: ‘263 claim elements 14pre, 17pre; ‘413 claim elements 1pre, 10pre; and **‘801 claim elements 1pre, 1a, 5pre, 5a, 10pre, 10a, 10c, 15pre, 15a, 15c.** CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1599 (Legacy Guide Screenshots for the ‘413 Patent); CX-1602 (Legacy Guide Screenshots for the ‘801 Patent). CX-0002C (Shamos WS) at Q/A 242, 255, 263, 284, 299, 302, 312, 314, 324, 326, 330, 340, 342, 346.”

*See* Rovi Br. at 66 (emphasis added).

Comcast presents two separate arguments for the accused X1 and Legacy products. *See generally* Resps. Br., Sections VIII(C)(2)(a)(vii), VIII(C)(2)(b)(vi) (the remaining sub-headings indicate Comcast’s arguments are directed toward the ‘263, ‘413, and ‘801 Patents collectively or the ‘263 and ‘413 Patents together).

#### a) Claim 1

Dr. Shamos, Rovi’s expert, presents his analysis for claim 1 in relation to six alphanumeric limitations (1pre, 1a, 1b, 1c, 1d, and 1e). *See* CX-0002C at Q/A 298-309. The subparts are presented, as follows:

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[1pre] 1. A method of enabling a user to perform recordings, the method comprising:

[1a] generating, with a remote guide accessible by a user of a remote device, a display comprising a plurality of program listings for display on the remote device, wherein the display is generated by the remote guide based on program guide information received from a local guide implemented on user equipment via the Internet, wherein the user equipment is remote to the remote device, wherein the user equipment is located at a user site, and wherein the local guide generates a display of one or more program listings for display on a display device at the user site;

[1b] receiving, with the remote guide, a user selection of a program listing from the plurality of program listings, wherein the user selection identifies a program corresponding to the selected program listing for recording by the local guide;

[1c] transmitting, with the remote guide, a communication to the local guide identifying the program corresponding to the selected program listing via the Internet;

[1d] receiving the communication with the local guide; and

[1e] responsive to the communication, scheduling, with the local guide, the program corresponding to the selected program listing for recording by the user equipment.

See CX-0002C at Q/A 298-309.

### (1) *X1 System*

Comcast argues:

Comcast's X1 platform does not infringe the limitations of every '801 patent claim related to receiving "program guide information" from the local guide. Rovi initially only alleged that the "program guide information" constituted information about scheduled recordings (*i.e.*, the "red dots") that Rovi alleged was received from the user's STB. See, *e.g.*, CDX-0328C.000157-161. As discussed below, this infringement theory presents multiple problems for Rovi and, therefore, Dr. Shamos has backpedaled from it dramatically.

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Resps. Br. at 99. Comcast then presents its “local guide” claim construction arguments again and argues that it does not infringe because its client applications do not obtain program listings from the “local guide.” *Id.* Comcast argues:

The archetecgture [*sic*] used by Rovi providing program guide information to the remote guide and the local guide from a “centralized location” was disclosed in the specification, but is an unclaimed embodiment. Fig. 2a of the patent shows that the program guide information is transmitted from the headend to the user equipment and from the user equipment to the remote device. Tr. 213:3-22. This is the embodiment recited in the claims. *See id.* at 215:1-12. Fig. 2b, on the other hand, discloses an embodiment where the program guide information is transmitted directly not only to the user equipment, but also to the remote device. *See id.* at 213:23-214:25. The important distinction here is that in Fig. 2b, the remote device’s source of the program guide information is not the user equipment. *See id.* at 215:13-216:6.

*Id.* at 102.

In claim 1, “program guide information” is found only in limitation 1a. *See* CX-0002C at Q/A 300. Dr. Shamos explained that the accused X1 products satisfy limitation 1a, as follows:

**Q301. How is this element met by the X1 system?**

A. The same reasoning and evidence cited for ‘263 1pre, 1a, 1b, and 1c apply here. In the XI system, the program guide information is received over HTTP on the bottom row of the figure in CX-1791 and CDX-305C.2. The remote guide has no source of information other than what it receives over HTTP.

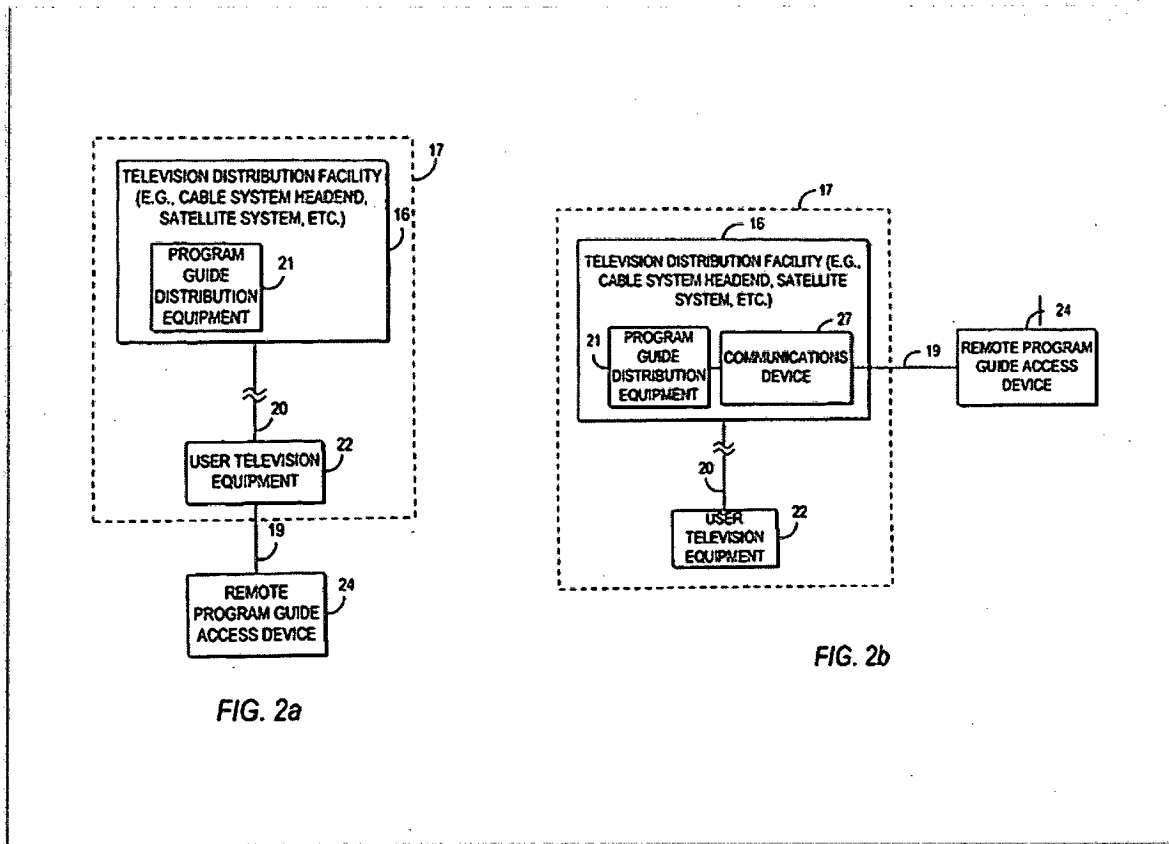
*Id.* at Q/A 301.

The administrative law judge has determined that claim 1 is not infringed. Limitation 1a requires, in pertinent part, the remote guide to generate a display using program guide information from a local guide that is implemented on user equipment located at a user site. *See* JX-0003 at 40:8-15. At the hearing, Dr. Shamos testified that Figs. 2a and 2b were different

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embodiments that differ in their relationship to user television equipment (22). Tr. 213-219.

These are the figures:



JX-0003 at 11-12.

Rovi has not sufficiently shown that the accused X1 system includes a remote device that receives program guide information from a local guide implemented on user equipment (e.g., a set-top box and television) located at a user site, via the Internet. *See generally* CX-0002C at Q/A 301 (the “reasoning and evidence cited for ‘263 1pre, 1a, 1b, and 1c” does not address “program guide information” from a local guide located at a “user site”). Accordingly, the administrative law judge finds that the accused X1 system does not infringe claim 1 of the ‘801 Patent.

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### (2) *Legacy System*

Rovi has not presented a separate argument for the Legacy system. *See generally* Rovi Br., Section V(E)(1). Rovi's reply provides:

The parties agree that the disputes regarding the X1 and Legacy Accused Products are “essentially the same” and/or “exactly the same.” Resps. Br. at 103-04. The parties also agree that the disputes regarding the DI Products contain “the same issue[s] as with infringement.” Resps. Br. at 114-15. Thus, because the X1 Accused Products infringe, the Legacy Accused Products should be found to infringe. *Id.* at 103-04; Compls. Br. at 60-85 (discussing infringement by both the X1 and Legacy systems). Similarly, because the Accused Products infringe, the DI Products should be found to practice the Asserted Claims. Resps. Br. at 114-15; Compls. Br. at 95-108 (discussing the DI Products' practice of the Asserted Claims).

Rovi Reply at 38-39.

Comcast argues:

Comcast's Legacy platform does not infringe any asserted claim of the '801 patent because the remote guide does not receive “program guide information” from the local [sic] guide. The dispute here is essentially the same as for the X1 system. *See* § VII.C.2.a.i.(7) [sic]. The only material difference between X1 and Legacy STBs for this issue is that, in the Legacy platform, the source of scheduled recordings is the [ ] server, rather than the [ ] But, in any event, the source is still not the guide software or anything on the STBs, and, is therefore not the “local guide” under Comcast's construction or the reasonable view of Rovi's construction of “local guide.”

Resps. Br. at 104.

Rovi has not sufficiently shown that the accused X1 system includes a remote device that receives program guide information from a local guide implemented on user equipment (e.g., a set-top box and television) located at a user site, via the Internet. *See generally* CX-0002C at Q/A 301-302 (the “reasoning and evidence cited for ‘263 1pre, 1a, 1b, and 1c” does not address “program guide information” from a local guide located at a “user site”). Accordingly, the

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administrative law judge finds that the accused Legacy system does not infringe claim 1 of the '801 Patent.

### *b) Claims 5, 10, and 15*

The administrative law judge determined that Comcast does not infringe claim 1 (above). The administrative law judge has determined that Comcast does not infringe claims 5, 10, and 15. Neither Rovi nor Comcast presents separate, substantive argument as to whether Comcast does or does not infringe claims 5, 10, and 15. Accordingly, the administrative law judge finds that Comcast does not infringe claim 5, 10, and 15 for the same reasons it does not infringe claim 1.

### *c) Comcast's Additional Non-Infringement Arguments*

Comcast's alternative designs arguments are predominately directed to the '263 and '413 Patents. *See* Resps. Br. at 104-06. For the '801 Patent, Comcast argues:

As a second alternative design, even under Rovi's view of the scope of "local guide," Comcast could also entirely remove the ability to remotely schedule a recording from the accused mobile/client applications and thereby avoid Rovi's infringement allegations for all three of the Remote Access patents. RX-0850C at Q/A 221; Tr. 198:2-22. Removing this entire feature could be eliminated as easily as the other alternative designs. RX-0850C at Q/A 222.

*Id.* at 105.

Assuming the '801 Patent is found infringed, then the administrative law judge's determination with respect to Comcast's second alternative design from Section IV(B)(c)(1) (*i.e.*, that Comcast cannot avoid infringement simply because there may be alternative ways to use the accused products) also applies here.



#### 4. Indirect Infringement

In the event that the accused products are found to infringe the '801 Patent, the administrative law judge has analyzed Rovi's inducement and contributory infringement arguments.

Rovi does not present a separate argument for the '801 Patent. *See generally* Rovi Br., Sections V(E)(4), V(F) (the '263, '801, and '413 Patents are addressed collectively).

Comcast generally presents a joint argument for the '263, '801, and '413 Patents. *See generally* Resps. Br., Section VIII(C). For the '801 Patent, Comcast adds:

For the '801 patent, all of the claims recite the "program guide information" limitations. RX-0850C at Q/A 81. To infringe any of the asserted claims of the '801 patent, the "remote guide" must "generate[] ... a display ... based on program guide information received from a local guide" or similar claim language. *Id.* And the user must then make a selection from the display generated based on program guide information received from the local guide. *Id.* If Rovi is going forward with its "red dot" infringement theory, which they do not, the spreadsheets provided by Peter Nush merely show that remote recordings have occurred, not that there were actually any scheduled recordings visible on the display before the user made a program selection. RX-0839C at Q/A 42. Therefore, the Peter Nush spreadsheets fail to demonstrate *any* instance of direct infringement of the '801 patent.

Resps. Br. at 108.

##### *a) Knowledge of the '801 Patent and Specific Intent to Infringe*

The administrative law judge finds that Comcast had the requisite intent and knowledge of the '801 Patent for the same reasons provided in the discussion of the '263 Patent above. *See* Section IV(B)(5)(a).

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### ***b) Induced Infringement of the '801 Patent***

#### ***(1) Comcast's Customers***

Rovi has not sufficiently shown that customers actually utilize the accused X1 or Legacy products in an infringing manner. *See Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033-34 (Fed. Cir. 2002) (explaining the rule that “[u]pon a failure of proof of direct infringement, any claim of inducement of infringement also fails” and then reversing summary judgment of no infringement based upon evidence that the defendant demonstrated the product to prospective buyers). In particular, Rovi has not sufficiently shown that a customer uses a remote device within the accused systems in a manner that receives program guide information from a local guide implemented on user equipment (*e.g.*, a set-top box and television) located at a user site, via the Internet. *See generally* CX-0002C at Q/A 301-302 (the “reasoning and evidence cited for ‘263 1pre, 1a, 1b, and 1c” does not address “program guide information” from a local guide located at a “user site”). Thus, the administrative law judge finds that Comcast has not induced its customers to infringe claims 1, 5, 10, and 15.

#### ***(2) Comcast's Suppliers***

Comcast has not argued or shown that ARRIS or Technicolor practice the method recited in claim 1. *See generally* Rovi Br., Section V(E)(4) (Rovi's arguments focus on use of a remote device, which is not attributed to manufacturers). Accordingly, the administrative law judge finds that Comcast has not induced ARRIS and Technicolor to infringe claims 1, 5, 10, and 15.

### ***c) Contributory Infringement of the '801 Patent***

As with the '263 Patent, the administrative law judge has determined that Rovi has fallen short of meeting its burden of showing that the accused products have no substantial non-infringing uses; rather, the evidence shows that there are many substantial non-infringing uses of

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the accused set-top boxes and their corresponding ecosystem. The administrative law judge finds the ARRIS and Technicolor do not contributorily infringe claims 1, 5, 10, and 15 of the ‘801 Patent for the same reasons they do not contributorily infringe the asserted claims of the ‘263 Patent. *See* Section IV(B)(5)(c).

### 5. Domestic Industry – Technical Prong

Rovi does not clearly identify which claims of the ‘801 Patent are practiced by the domestic industry products. *See generally* Rovi Br., Section V(G). Rather, Rovi explains:

For purposes of brevity, Rovi refers to the ‘263 Patent claim elements below and indicate relevant claim elements of the ‘413 and ‘801 patents wherever the same evidence is applicable in showing whether the claim element has been met. Relevant claim language as to all claims is provided in full at CDX-0307C (CX-0002C (Shamos WS) at Q/A 383-433).

Rovi Br. at 97. For instance, the conclusion of Rovi’s argument for the preamble of claim 1 of the ‘263 Patent is typical for the Rovi (i-Guide, Passport, and TotalGuide xD) and Verizon FiOS domestic industry products:

The evidence and arguments made with respect to ‘263 claim element 1pre also show that the following claim elements are met by the Rovi systems: ‘263 claim elements 14pre, 17pre; ‘413 claim elements 1pre, 10pre; and **‘801 claim elements 1pre, 1a, 5pre, 5a, [sic] 10pre, 10a, 10c, 15pre, 15a, 15c.** CX-0002C (Shamos WS) at Q/A 434-35, 444-45, 452-53, 474-75, 488-89, 490-92, 504-07, 516-19, 522-23, 532-35, 538-39.

Rovi Br. at 98 (emphasis added).

For the ‘801 Patent specifically, Comcast argues: [

] Resps. Br. at 116.

Mr. Thomas, who is also a named inventor on the ‘263, ‘801, and ‘463 Patents, testified, as follows:

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JX-0118C at 39:11-41:18, 87:7-22, 88:9-89:25.

For the Verizon FiOS products, as with infringement, Rovi relies upon the same evidence and argument presented for claim 1 of the '263 Patent to argue that the Verizon FiOS products practice claims 1, 5, 10, and 15 of the '801 Patent. *See generally* Rovi Br., Section V(G)(2). The administrative law judge finds that Rovi has not sufficiently shown that the Verizon products include a remote device that receives program guide information from a local guide implemented on user equipment (*e.g.*, a set-top box and television) located at a user site, via the Internet. *See generally* CX-0002C at Q/A 391, 397 (the "remote access link" is not explained in enough detail). Accordingly, the administrative law judge finds that the Verizon products do not practice claim 1 of the '801 Patent.

In sum, the administrative law judge has determined that the evidence shows that Rovi's domestic industry products (i-Guide and Passport) and the Verizon FiOS system do not practice claims 1, 5, 10, and 15 of the '801 Patent.

**6. Patent Eligibility**

Comcast does not present a separate § 101 argument for the ‘801 Patent. *See generally* Resps. Br., Section VIII(E)(7) (arguing that claim 1 of the ‘263 Patent is representative). The administrative law judge finds that the asserted claims of the ‘801 Patent are not directed to ineligible subject matter for the same reasons that claim 1 of the ‘263 Patent is not directed to ineligible subject matter.

**7. Validity**

**a) Anticipation**

For the avoidance of doubt that may arise from the parties’ briefs, the administrative law judge notes that Comcast does not argue that any of the many references it presents anticipate the ‘801 Patent. *See generally* Resps. Br., Section VIII(E); *see also* Joint Outline at 8-9. Rather, for the ‘801 Patent, Comcast argues:

- “The asserted claims of the ‘801 patent were at least obvious in view of Kondo and Humpleman.” Resps. Br. at 117 (citing RX-0007C (Wigdor WS) at Q/A 232).
- “The asserted claims of the ‘801 patent were at least obvious in view of Blake and Humpleman.” Resps. Br. at 133 (citing RX-0007C (Wigdor WS) at Q/A 295).
- “The asserted claims of the ‘801 patent were at least obvious in view of Shteyn and Humpleman.” Resps. Br. at 142 (citing RX-0007C (Wigdor WS) at Q/A 350).
- “The asserted claims of the ‘801 patent were at least obvious in view of Sato, Young, and Humpleman.” Resps. Br. at 148 (citing RX-0007C (Wigdor WS) at Q/A 397).

Comcast’s obviousness arguments are addressed below.

**b) Obviousness**

*(1) Kondo (RX-0245), in view of Humpleman (RX-0224)*

Comcast argues:

The only features that are even arguably missing from Kondo are the use of “user profiles” to create the display on the remote guide

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(for the '263 Patent and '413 patent) and providing program guide information to the remote guide from the local guide (for the '801 patent). These features, however, even if not explicitly disclosed by Kondo, were well known in the relevant art and would have been obvious to apply to the system of Kondo, as explained below.

Resps. Br. at 117. Comcast adds:

Humpleman discloses a system where a household contained several devices that could communicate with each other through accessing HTML pages. *See* RX-0224.0021 at 1:21-25; 2:46-63. One of the uses Humpleman envisioned for these devices was sharing program guides between the various devices. *See* RX-0224.0031 at 22:50-23:39.

Rovi's reply does not address Comcast's argument, for the '801 Patent, for Kondo. *See generally* Rovi Reply, Section VI(G).

The evidence shows that Humpleman teaches a home network system that satisfies the "remote guide based on program guide information received from a local guide implemented on user equipment." *See* RX-0007C at Q/A 274-75, 335-36, 383-84, 447-48 (Dr. Wigdor presents duplicative testimony about Humpleman).

Dr. Wigdor, however, does not explain how or why one of ordinary skill in the art would assemble Kondo and Humpleman to solve a problem from the art, or why one of ordinary skill in the art would modify Kondo, the primary reference. *See Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) ("Where, as here, the necessary reasoning is absent, we cannot simply assume that 'an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.'").<sup>109</sup>

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the Kondo and Humpleman references.

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<sup>109</sup> *See* n.92, *supra*.

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(2) *Blake (RX-0269), in view of Humpleman (RX-0224)*

As determined above, the evidence shows that Humpleman teaches a home network system that satisfies the “remote guide based on program guide information received from a local guide implemented on user equipment.” *See* RX-0007C at Q/A 274-75, 335-36, 383-84, 447-48 (Dr. Wigdor presents duplicative testimony about Humpleman).

Dr. Wigdor, however, does not explain how or why one of ordinary skill in the art would assemble Blake and Humpleman to solve a problem from the art, or why one of ordinary skill in the art would modify Blake, the primary reference. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>110</sup>

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the Blake and Humpleman references.

(3) *Shteyn (RX-0265), in view of Humpleman (RX-0224)*

As determined above, the evidence shows that Humpleman teaches a home network system that satisfies the “remote guide based on program guide information received from a local guide implemented on user equipment.” *See* RX-0007C at Q/A 274-75, 335-36, 383-84, 447-48 (Dr. Wigdor presents duplicative testimony about Humpleman).

Dr. Wigdor, however, does not explain how or why one of ordinary skill in the art would assemble Shteyn and Humpleman to solve a problem from the art, or why one of ordinary skill in the art would modify Shyten, the primary reference. *See Plantronics*, 724 F.3d at 1354 (“Where,

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<sup>110</sup> *See* n.92, *supra*.



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as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>111</sup>

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the Shteyen and Humpleman references.

(4) *Sato (RX-0264), in view of Humpleman (RX-0224)*

As determined above, the evidence shows that Humpleman teaches a home network system that satisfies the “remote guide based on program guide information received from a local guide implemented on user equipment.” *See* RX-0007C at Q/A 274-75, 335-36, 383-84, 447-48 (Dr. Wigdor presents duplicative testimony about Humpleman).

Dr. Wigdor, however, does not explain how or why one of ordinary skill in the art would assemble Sato and Humpleman to solve a problem from the art, or why one of ordinary skill in the art would modify Sato, the primary reference. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>112</sup>

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the Sato and Humpleman references.

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<sup>111</sup> *See* n.92, *supra*.

<sup>112</sup> *See* n.92, *supra*.

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(5) *Sato (RX-0264), in view of Young (RX-0253) and Humpleman (RX-0224)*

As determined above, the evidence shows that Humpleman teaches a home network system that satisfies the “remote guide based on program guide information received from a local guide implemented on user equipment.” *See* RX-0007C at Q/A 274-75, 335-36, 383-84, 447-48 (Dr. Wigdor presents duplicative testimony about Humpleman).

Dr. Wigdor, however, does not explain how or why one of ordinary skill in the art would assemble Sato, Young, and Humpleman to solve a problem from the art, or why one of ordinary skill in the art would modify Sato, the primary reference. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>113</sup>

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the Sato, Young, and Humpleman references.

(6) *Secondary Considerations*

Neither Rovi nor Comcast have presented separate secondary-consideration arguments, *i.e.*, apart from the ‘263 and ‘413 Patents, for the ‘801 Patent. *See generally* Rovi Br., Section V(H)(3); Resps. Br., Section VIII(E)(5). Accordingly, neither Rovi nor Comcast have shown that the secondary considerations support or negate an obviousness determination.

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<sup>113</sup> *See* n.92, *supra*.

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### *c) Indefiniteness*

The Joint Outline presents an issue of indefiniteness for the ‘801 Patent. *See* Joint Outline at 9. Comcast’s brief does not clearly address whether claims of the ‘801 Patent are indefinite. *See generally* Resps. Br. at 158-60. If Comcast has not presented a separate argument, then the claims of the ‘801 Patent are not indefinite for the same reasons the ‘263 Patent’s asserted claims are not indefinite. To the extent that this is a separate argument, the administrative law judge finds that Comcast has fallen short of demonstrating that the claims of the ‘801 patent are indefinite.

### **D. U.S. Patent No. 8,566,871**

#### **1. Overview of the ‘871 Patent (JX-0004)**

The ‘871 Patent, entitled “Multiple interactive electronic program guide system and methods,” issued on October 22, 2013. The application that would issue as the ‘871 Patent, Application No. 11/182,081, was filed on July 15, 2005. The ‘871 Patent claims the benefit of several applications, the earliest of which is a provisional application, 60/094,564, which was filed on July 29, 1998. *See* JX-0004 at 1:7-19. The ‘871 Patent discloses a system for managing and displaying multiple IPGs. *Id.* at 1:23-25.

Comcast has introduced the ‘871 Patent as a patent that “aggregates multiple types of events from different IPGs . . . into a single listing.” *See* Tr. 37.

#### **2. Claim Construction**

##### *a) Level of Ordinary Skill in the Art*

Rovi’s entire argument is:

One of ordinary skill in the art would have a bachelor’s degree in electrical engineering, computer engineering, or computer science,

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and two to three years of experience relating to electronic content delivery, such as experience with cable or satellite television systems, set-top boxes, multimedia systems or electronic program guides, or any equivalent knowledge, training, and/or experience. CX-0004C (Delp WS) at Q/A 42-44.

Rovi Br. at 202-03.

Comcast's entire argument is:

A POSITA of the '871 Patent as of Rovi's proposed date of invention would have a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline, and at least two to three years of experience or familiarity with electronic program guides, television video signal processing, graphical user interfaces, and associated computer software. In the alternative, a POSITA of the '871 Patent could have equivalent experience either in industry or research, such as designing, developing, evaluating, testing, or implementing the previously mentioned technologies.

Resps. Br. at 232.

In view of the expert testimony and consensus between the parties, the administrative law judge has determined that a person having ordinary skill in the relevant art would have a bachelor's degree in electrical engineering, computer engineering, or computer science, and two to three years of experience relating to electronic content delivery, such as experience with cable or satellite television systems, set-top boxes, multimedia systems or electronic program guides, or any equivalent knowledge, training, and/or experience. *See* CX-0004C (Delp WS) at Q/A 42-44.

### ***b) Disputed Claim Terms***

#### ***(1) Preamble***

The preamble of claim 12, the only claim asserted from the '871 Patent, is: "12. A system for displaying interactive electronic program guides, the system comprising[.]" JX-0004 at 26:32-33. The parties have proposed that:

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Rovi's Preamble Proposal	Comcast's Preamble Proposal
The preamble is not limiting. No construction is necessary.	"Comcast's proposed constructions for the preamble and the terms containing the phrase 'in the household,' reflect the understanding of a POSTIA that the claimed 'interactive electronic program guides' or 'first and second interactive electronic program guides' within the 'system' referred to in the preamble are executed and embodied in a household in a single STB, and not on remote hardware located, in a cable system headend."

See Rovi Br. at 203-04; Resps. Br. at 235.

Rovi argues:

The preamble of claim 12—the only independent claim of the '871 Patent at issue in this Investigation—is not limiting. Presumptively, a preamble is not limiting. . . . Here, the preamble of claim 12 recites only: "A system for displaying interactive electronic program guides, the system comprising . . ." This language recites no "essential structure or steps"—those are found in the body of the claim. Instead, the claim only recites the purpose of the invention—displaying IPGs—and nothing more.

To the extent the preamble of claim 12 is considered limiting, it should be construed with its plain and ordinary meaning. Respondents contend that the preamble requires the claimed electronic program guides to be "embodied in a single set-top box." But nothing in the preamble (or elsewhere in the claim language) requires the multiple electronic program guides to be embodied in a single set-top box. CX-0004C (Delp WS) at Q/A 97. To the contrary, the intrinsic evidence expressly provides for IPGs residing in more than one set top box. CX-0004C (Delp WS) at Q/A 97; JX-0004 ('871 Patent) at col. 3, lns. 28-33 ("*IPGs may reside in multiple electronic devices or set top boxes.*"); Rinard Tr. 835. Respondents and their expert dismiss this clear disclosure of an embodiment with multiple electronic program guides in separate set top boxes by referring to Figure 1B and different preferred embodiments. See RX-0849C (Rinard RWS) at Q/A 36. But those embodiments are exemplary, not mandatory, and the intrinsic evidence expressly discloses a multiple set top embodiment, each with its own program guide, which falls within

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the plain language of the preamble. CX-0004C (Delp WS) at Q/A 97; JX-0004 ('871 Patent) at col. 3, lns. 28-33, col. 6, lns. 22-24; Rinard Tr. 835. If the term “interactive electronic program guides” in the preamble is construed, it should not be limited to guides “embodied” in a single set top box.

Rovi Br. at 203-04 (emphasis added).

Comcast argues:

Comcast’s proposed constructions for the preamble and the terms containing the phrase “in the household,” reflect the understanding of a POSTIA that the claimed “interactive electronic program guides” or “first and second interactive electronic program guides” within the “system” referred to in the preamble are executed and embodied in a household in a single STB, and not on remote hardware located, in a cable system headend. Rovi’s assertion that the preamble to Claim 12 is not limiting and needs no construction is incorrect. The preamble sets forth the “interactive electronic program guides” or “first and second interactive electronic program guides” limitations that are referred to throughout the body of the claims. In the body of the claims, the guides first referred to in the claim preamble are further defined. Claim 12 confirms that the IPG application must be executed and embodied in the household instead of on remote hardware located at a headend: “the first and second interactive electronic program guides in the household.” Comcast’s construction is not only supported by the claim language but is supported by the specification as well. The ‘871 Patent specification emphasizes that a multiple IPG system with “first and second interactive electronic program guides” is embodied in a single STB. *See, e.g.*, JX-0004 at Abstract. In fact, the specification distinguishes the prior art and summarizes the “present invention” on this basis. JX-0004 at 1:29-52, 1:61-66. Fig. 1B of the ‘871 Patent shows all elements of the claimed subject matter within a single STB, and the specification states, “Preferably, the multiple IPGs are embodied in a single STB.” JX-0004 at 3:20-21.

Dr. Delp’s witness statement cites the JX-0004 at 6:20-24, apparently in support of his position that the patent encompasses multiple IPGs being implemented in a multiple STB configuration. JX-0004 at 6:20-24; CX-0004C at Q/A 97. Contrary to Dr. Delp’s position, this excerpt refers to a configuration in which three, or more generally, several, sources are all delivered and distributed through a single STB. Each source has its own IPG, with multiple IPGs on the same STB. This excerpt, and the surrounding context

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in the patent, support the position that the invention is limited to single STB configurations. Dr. Delp's also cites the '871 Patent at 3:20-34. But Fig. 1B of the '871 Patent shows all elements of the claimed subject matter within a single STB, and the specification states, "Preferably, the multiple IPGs are embodied in a single STB." JX-0004 at 3:20-21. In other words, despite Dr. Delp's suggestion that multiple sources correspond to multiple STBs, the '871 Patent makes clear that it supports multiple sources in a single STB.

The prosecution history shows that the claims in the '871 Patent application and related applications were allowed only when amended to restrict the claimed subject matter to an architecture in which the guides are each in a household (instead of a headend) and are incorporated in a memory and processor that "reside in a single electronic device." In the PTO's Notice of Allowance at page 2, the examiner expressly relied on and highlighted these limitations in his reasons for allowance: "the memory and the microprocessor reside in a single electronic device." JX-0011.007323-7329 (Oct. 20, 2002, Notice of Allowance).

Resps. Br. at 235-37 (JX-0011.007328 mentions a "single device" and a "local network").

Rovi replies that Comcast cited the wrong Notice of Allowance<sup>114</sup> and argues that there is "no support for the proposition that the prosecution history of the '871 Patent somehow limited the claims to multiple guides embodied in a single STB." Rovi Reply at 80-81.

The administrative law judge has determined that the preamble is not limiting and that no construction is necessary.

Comcast correctly notes that the Abstract describes a single set-top box. *See* JX-0004 at Abstract. Moreover, the Summary of the Invention also focuses on a single set-top box embodiment:

The present invention relates to a multiple IPG system. Embodied in a single set-top box, the system provides different TV

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<sup>114</sup> The parenthesis in Comcast's citation refers to an Oct. 20, 2002, Notice of Allowance. The preceding text, however, cites to the June 24, 2013 Notice of Allowance (JX-0011.007323-7329). The administrative law judge has reviewed the Notice of Allowance that begins at page 7318 of JX-0004.

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programming and different IPGs to several different users respectively. The single set-top box is capable of providing programming and scheduling data to several different TV sets. Moreover, each of the different IPGs share some common data stored in a common database with each other. Therefore, a first IPG being viewed by a first user can display data added or modified via a second IPG by a second user of the system. Furthermore, the data added or modified by the second user can influence the viewing rights of the first user. Also, all the competing and conflicting requests for limited resources, such as VCR scheduled recordings, are brought to the users' attention and displayed or prompted by the system.

*Id.* at 3:61-4:7. Further, the Background of the Invention offers that “there is a need for a multiple IPG system in a single set-top box or a single computer wherein the IPGs share some data and are capable of notifying users of any competing and conflicting resources. There is also a need for a centralized parental control over the multiple IPGs.” *Id.* at 1:53-57.

As Rovi correctly notes, however, the ‘871 Patent discloses an alternative embodiment where “the IPGs may reside in multiple electronic devices or set top boxes[.]” *Id.* at 3:28-30. This weighs against construing the preamble such that the system is limited to a single set-top box. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001) (finding disclaimer where the patentee explained that “***all embodiments*** of the present invention” had a coaxial lumen (emphasis added)); *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 908 (Fed. Cir. 2004) (finding no disclaimer where the patentee explained that “[a]ccording to the principles of the present invention, there is provided an angiographic injector . . . [that can be loaded] through an opening that is provided in the front end of the pressure jacket” did not “disclaim the use of the invention in the absence of a pressure jacket.”). Further, Comcast’s arguments concerning the prosecution history are not supported by the evidence cited. Indeed, the Notice of Allowance cited does not contain the word “reside” or the term “single



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electronic device,” and Comcast’s errata to its post-hearing briefs did not correct this error (despite having the benefit of Rovi’s reply).

### (2) *Event*

The term “event” appears in the claims (*i.e.*, claims 1, 7-9, 11, 12, 18, 19, 20, 22, 23, 29-31, and 33) and throughout the specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No construction is necessary. Alternatively, activity related to one or more programs.	“a designation of a scheduled function related to a television program, such as a reminder, a recording, a pay-per-view purchase, an automatic tune, or a show to be blocked”

See Rovi Br. at 204-05; Resps. Br. at 233.

Rovi’s entire argument for this term follows:

Rovi and Respondents both state that no construction is necessary of the claim term “event”; however, the alternative constructions of the parties are different. CX-1702C (Corrected Joint ID of Disputed Claim Terms) at 37. Rovi’s proposed alternative construction of “event” is “activity related to one or more programs,” and Respondents’ proposed alternative construction is “a designation of a scheduled function related to a television program, such as a reminder, a recording, a pay-per-view purchase, an automatic tune, or a block.” *Id.* Rovi’s proposed construction is correct. No intrinsic evidence limits an “event” to a “designation of a scheduled function” such that actual activities are excluded. To the contrary, the ‘871 Patent teaches that the term event encompasses more than mere designations, such as an actual activity related to one or more programs. CX-0004C (Delp WS) at Q/A 86-88; JX-0004 (’871 Patent) at col. 11, lns. 19-23. An event is not an isolated function like “record” or “purchase” that can be applied to a show. It is a function or “activity” applied to a *particular* show or program. If this term is construed, Rovi’s proposed alternative construction should be adopted.

Rovi Br. at 204-05.

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Comcast argues:

The '871 Patent specification and prosecution history support Comcast's proposed construction, that an "event" is a designation of a scheduled function related to a television program, such as a reminder, a recording, a pay-per-view purchase, an automatic tune, or a show to be blocked. Each and every relevant mention of the word "event" in the '871 specification is clearly directed at the functions related to television programs that can appear on the Scheduled Events List. *See, e.g.*, JX-0004 ('871 Pat.) at 3:30-33 ("they would still share data such as an Scheduled Events List including, for example, an aggregate list for all individual recordings and series recordings, future PPV purchases, and scheduled tunes."); JX-0004 at 11:19-22 ("Scheduled events (shows scheduled to record, watch or blocked) for each IPG can be stored in a single non-volatile memory such as an EEPROM (not shown) within the single STB.").

The prosecution history shows that the claims in the '871 Patent application were allowed only when amended to restrict the claimed subject matter to specific functions, such as scheduled recording or watching, instead of the transmission of data corresponding to any "activity" related to programs. JX-0011.005455-68 (June 23, 2009 Amendent [*sic*]) (amending claims 40 and 49 to replace receiving and generating a list of "program guide information" with receiving "events" and generating a list of "scheduled events."). Thus, the language used by the applicant to define "events" in the patent specification and to distinguish prior art based on this claim language is more precise than Rovi's proposed construction of "activity related to one or more programs, and should be used to construe the term "event."

Resps. Br. at 233.

Rovi replies:

Respondents' proposed construction of "event" contradicts the intrinsic evidence; therefore, it cannot be correct. An "event" is not a designation of a scheduled function related to a television program, it is simply an activity related to one or more programs. CX-0004C (Delp WS) at Q/A 86-88; JX-0004 ('871 Patent) at col. 11, lines 19-22 (describing "events" as "shows scheduled to record, watch or blocked"), col. 27, lines 14-19 (claims 19 and 20). Respondents cite to the prosecution history of the '871 Patent, but neither the change in claim language nor its discussion by the

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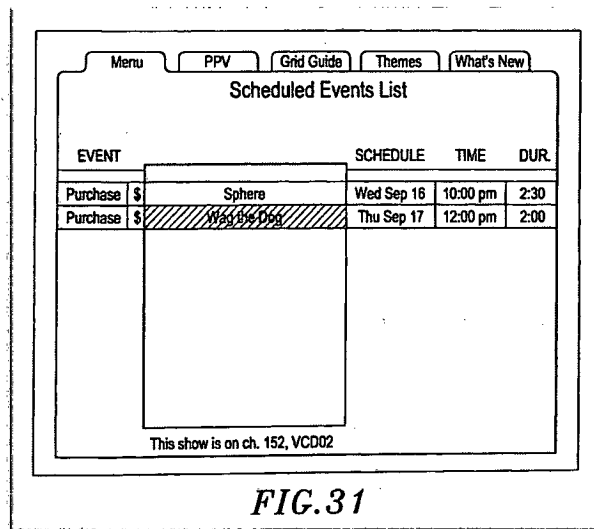
applicant supports Respondents' proposed construction. JX-0011 ('871 Patent File History) at 5466-67 (discussing the significance of the relevant amendments as applied to Ellis without any distinction between "program guide information" and "events").

Rovi Reply at 79.

The administrative law judge construes "event" to mean "activity related to one or more programs." The claims indicate that "events" include:

- "programs scheduled to be recorded" (claims 8, 19, and 30);
- "series recordings, future pay-per-view purchases, and auto-tunes" (claims 9, 20, and 31); and
- "a purchased program" (claims 11, 22, and 33).

The specification indicates that "events" include "*individual recordings and series recordings*, future PPV purchases, and scheduled tunes." JX-0004 at 3:32-33; 8:5-6 (emphasis added). The specification also indicates that a scheduled event includes "shows scheduled to record, watch or blocked[.]" *Id.* at 11:19-20. The specification also explains that figure 31 depicts "a television screen displaying a Scheduled Events List." Figure 31 is reproduced immediately below:



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Thus, the claims and the specification support Rovi's proposed construction that an event is an "activity related to one or more programs."

Comcast's construction is unduly restrictive, as it limits the claim scope only to examples provided in the '871 Patent. Further, Comcast's construction unnecessarily introduces the word "function." The specification uses the word "function" differently than the word "event." For example, in general, the specification uses the word "function" to describe schemes for controlling the television experience:

- "Each IPG includes a full menu system that allows the user to set up the IPG *functions* 'such as screen display position, and user preferences. An example of an IPG screen *function* is the Adjust Display Position screen *function*.'" JX-0004 at 5:5-8 (emphasis added);
- "Decoding, error detection, and error correction *functions* are performed by the decoder 2." JX-0004 at 7:15-17 (emphasis added);
- "FIG. 33 shows an example of a UI in each IPG for the VCHIP Plus+ *functions*. . . . The VCHIP Plus+ screens are accessed from the Menu bar; the user highlights the 'VCHIP Plus+' button on the menu bar, and then scrolls down to select from the menu of VCHIP Plus+ *functions*." JX-0004 at 10:44-58 (emphasis added);
- "A UI allows the users (parents) to pick their own passwords, and to disable the lockout when the passwords are lost. The *functions* of this UI include, but not limited to, the following:
  - (1) Fixed Overriding Password--This is hardwired in the equipment, and can always be used in case the user-defined password is lost.
  - (2) Repeating entry X times establishes new password--If the password is lost, the new password can be made by repeatedly entering the same password X number of times, and at the end of the process informing the user that the new password has been established.
  - (3) Power interruption after certain length of time allows new password to be entered--This allows the parent to "pull the plug" of the equipment and regain control after the password has been lost.
  - (4) Password review/re-entry through special service mode--By restricting that only the parents can access the special service mode, the password can be viewed safely in this way."

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JX-0004 at 11:48-67 (emphasis added); and

- “FIG. 35 is a flow chart of the master password operation. Obviously not all operations would require a password. As shown in block 391, the following operations have password protection: changing the password, changing the V-Chip ratings., deleting a ‘blocked’ program or deleting a ‘blocked’ channel, changing the ‘Babysitter’ *function*, unblocking a program or a channel within the ‘Babysitter’ *function*, changing the clock (this is because a different clock causes VCHIP Plus+ to block a different program), and changing the channel map (this is because a different channel map causes VCHIP Plus+ to block a different channel).” JX-0004 at 12:4-14 (emphasis added).

Thus, the intrinsic evidence does not support Comcast’s proposed construction.

(3) *Interactive electronic program guide*

The term “interactive electronic program guide” appears only in the claims (*i.e.*, claims 1-6, 10, 12-17, 21, 23-28, and 32). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
guide that allows navigation through television program listings and causes display of program information on user television equipment <sup>115</sup>	application that, when executed, causes television program listings to be presented to the user and enables the user to navigate through the program listings, to select an individual listing, and to select a function associated with the selected listing <sup>116</sup>

See Rovi Br. at 205; Resps. Br. at 233-34.

Rovi’s entire argument for this term follows:

... The ‘871 Patent describes an “interactive electronic program guide” as a specially-designed device with a user interface the user can see on the screen and interact with. CX-0004C (Delp WS) at Q/A 89-90; *see, e.g.*, JX-0004 (‘871 Patent) at col. 4, lns. 20-24 (“Each IPG provides the user with an interface.”). There does not

<sup>115</sup> This proposed construction is identical to Rovi’s proposed construction for the “local interactive television program guide” claimed in the ‘263 Patent.

<sup>116</sup> This proposed construction is identical to Comcast’s proposed construction for the “local interactive television program guide” claimed in the ‘263 Patent.

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appear to be much substantive difference in the relevant application of the parties' constructions.

Rovi Br. at 205 (introductory text presenting the constructions is omitted).

Comcast's entire argument for this term follows:

With regard to the term "interactive electronic program guide," Rovi's proposed construction, "guide that allows navigation through television program listings and causes display of program information on user television equipment," is too broad. Rovi's expert Dr. Delp has opined that the guide is not software, but merely the user interface. CX-0004C at Q/A 90. Rovi's proposed construction converts program guide functionality into an abstract concept, divorced from any particular apparatus or system. This assertion by Rovi and its expert is directly contradicted by the '871 Patent specification, which describes the guide as an "application," *i.e.*, computer software that is implemented and executed on a processor. Thus, Comcast's proposed construction of "interactive program guide" as an "application that, when executed, causes television program listings to be presented to the user and enables the user to navigate through the program listings, to select an individual listing, and to select a function associated with the selected listing" is correct.

Resps. Br. at 233-34.

Rovi replies:

Respondents mischaracterize Rovi's position with regard to the claim term "interactive electronic program guide." Respondents assert that Dr. Delp opined that the guide is not software. Resps. Br. at 233. Dr. Delp never makes such a statement. Dr. Delp describes a guide as a user interface, but does not say that the user guide is not software. CX-0004C (Delp WS) at Q/A 89-90; JX-0004 ('871 Patent) at col. 4, lns. 20-24 ("Each IPG provides the user with an interface.").

Rovi Reply at 79.

The administrative law judge construes the term "interactive electronic program guide" to mean "guide that allows navigation through television program listings and causes display of program information on user television equipment."

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Comcast's proposed construction relies upon Rovi's expert and unsupported argument. Further, Comcast's proposal of the phrases "application that, when executed, causes television program listings to be presented to the user and enables the user to navigate through the program listings, to select an individual listing, and to select a function associated with the selected listing" adds many unnecessary words that could needlessly limit the claim.

### (4) *User television equipment devices*

The term "user television equipment devices" appears only in the claims (*i.e.*, claims 1, 10, 12, 21, 23, and 32). The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
user device for receiving remotely provided audio-visual television programming	This term does not need to be construed, but if it is construed, the evidence supports the construction "devices designed for viewing or recording television programs, such as TV sets, STBs, and VCRs."

See Rovi Br. at 206; Resps. Br. at 235.

Rovi's entire argument for this term follows:

. . . As used in the '871 specification, user television equipment devices broadly connotes any user device for receiving remotely provided audio-visual television programming. CX-0004C (Delp WS) at Q/A 93-94; JX-0004 ('871 Patent) at col. 3, lns. 20-34.

Rovi Br. at 206 (introductory text presenting the constructions is omitted).

Comcast's entire argument follows:

This term does not need to be construed, but if it is construed, the evidence supports the construction "devices designed for viewing or recording television programs, such as TV sets, STBs, and VCRs." The '871 Patent specification is consistent in equating user television equipment with devices located in a household with capabilities for either displaying or recording television programs for a user. As shown in Figure 1A, user television equipment must be in the household and is different from any devices located at the

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headend, such as download server 60. And user equipment includes devices for displaying television programs. JX-0004 ('871 Pat.) at 3:23-28. The '871 Patent specification also indicates the user equipment can include devices for recording television programs, such as VCRs. *Id.* at 2:5-7, 3:65-67.

Resps. Br. at 235.

Rovi replies that “[t]he competing constructions of the parties are very similar; and, there does not appear to be a material difference (for the purposes of this Investigation) on the adopted construction.” Rovi Reply at 80.

Based on the similarities in constructions, Rovi’s assertion that there is not a material difference between the constructions, and the fact that the parties’ proposed constructions would not add meaning to the plain claim language, the administrative law judge has determined not to construe the term “user television equipment devices.”

### (5) *Located in a household*

The phrase “located in a household” appears only in the claims (*i.e.*, claims 1, 12, and 23). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No construction is necessary. Alternatively, placeable in a household.	Comcast proposes that no construction is necessary, but if it is, then the construction is “kept and used at home.”

*See* Rovi Br. at 206-08; Resps. Br. at 232.

Rovi’s entire opening argument for this phrase follows:

The primary dispute between the parties is whether the claim phrases “located in a household” and “in the household” describe physical capabilities and characteristics of the user television equipment devices (as urged by Rovi) or a physical location where infringement occurs (as urged by Respondents). Rovi proposes that “located in a household” and “in the household” should be construed to mean “placeable in a household.” Respondents contend that each phrase need not be construed, or in the



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alternative, should be construed in accordance with their plain and ordinary meaning which is alleged to be “kept and used at home.”

Intrinsic evidence makes clear (and there is no dispute in the record) that the patentee used the phrase “in the household” in a particular manner with a clear, articulated meaning. Uncontroverted evidence shows that the patentee added the “in the household” to distinguish between head-end distribution equipment and household equipment like set top boxes. JX-0011 (’871 Patent File History) at 5466 (distinguishing between the receipt of program guide information from a television distribution facility and interactive electronic program guides); Delp Tr. 981, 1024-25 (“They were talking about equipment that was placeable in the household and not equipment that was located at the cable headend, or the distribution center.”). The context of “in the household” phrase confirms its usage by the patentee: “a plurality of *user television equipment devices* that are located *in a household* and *from which first and second electronic program guides are accessible.*” JX-0004 (’871 Patent) at col. 26, lns. 34-36 (emphasis added). Given the clear statements in the intrinsic evidence, one of ordinary skill in the art would understand that the phrase “located in a household” is akin to a statement of intended use (*i.e.*, the user television equipment devices are placed or put or used in the household) and is being used to differentiate consumer equipment (*e.g.*, set-top boxes) from large scale corporate equipment (*e.g.*, cable headends). CX-0004C (Delp WS) at Q/A 98; Delp Tr. 981, 1024-25. In other words, the recited system is designed to provide IPGs accessible from equipment designed to be used, *i.e.*, placeable, in homes regardless of the physical location of the equipment at any given time. CX-0004C (Delp WS) at Q/A 99.

Rovi Br. at 206-08.

Comcast’s entire argument follows:

Rovi’s proposed construction of “located in a household,” merely requires the claimed invention be “placeable in a household,” as opposed to “located in” a household. This proposed construction is vague, overbroad, and completely reads the term “located in” out of the claim. In particular, Rovi’s proposed construction is inconsistent with the express claim language, the patent specification, and the prosecution history because the construction attempts to read on a program guide system with functionality that is implemented and executed outside of a household, such as on remote hardware in a headend. The ’871 Patent claim 12 was distinguished over the prior art by amending proposed claims 40

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and 49 to include the requirement that the guides “are in the household.” *See, e.g.,* JX-0011.005458 (June 23, 2009 Amendment at 12). *See also* Tr. 980:9-981:14.

In contrast, Comcast proposes that no construction is necessary, but if it is, then the construction is “kept and used at home.” This construction is more consistent with the prosecution history and specification of the ‘871 Patent. Simply put, the applicants were aware of a system that included remote hardware, for example data center headend 20 and/or network operator headend 30, but did not claim it. *See* JX-0004 (‘871 Patent) at Fig. 1A.

Resps. Br. at 232-33.

Rovi replies:

Rovi’s proposed construction of the terms “located in a household” and “in a household” gives the proper weight to the applicant’s statements during prosecution of the application resulting in issuance of the ‘871 Patent. Compls. Br. at 206-08. While Respondents cite to the proper part of the prosecution history (JX-0011 (‘871 Patent File History) at 5466), the applicant’s statements are not applied in Respondents’ proposed construction. The relevant statements in the prosecution history have nothing to do with where the relevant equipment is “kept” or “used at.” There is also no evidence that applicant intended to differentiate between an IPG found exclusively on a local device and an IPG with distributed functionality. The applicant differentiated between the receipt of program listings and other information from equipment typically found at the headend (as was common in prior art systems including Ellis) and a device such as a set-top box. CX-0004C (Delp WS) at Q/A 98-100; Delp Tr. 1024-25.

Rovi Reply at 78.

The administrative law judge construes “located in a household” to mean “kept and used at home.” A portion of the prosecution history that the parties cited follows:

The Examiner alleges that in Ellis the receipt of information from a television distribution facility is the same as applicants’ claimed feature of receiving program guide information from a first and second one of a plurality of interactive electronic program guides (Office Action, page 3). Applicants respectfully disagree.

Applicants’ claims 31, 40, and 49 patentably improve upon Ellis by receiving scheduled events from a first and second one of a

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plurality of interactive electronic program guides *that are each in the household*. In particular, in Ellis, program listings and other information (e.g., advertisements, paid programming) (i.e., the alleged program information received from interactive program guides) are received from one or more distribution facilities that are outside of a household (Ellis ¶¶ 63 and 67) and *not from first and second interactive electronic program guides that are in the household*.

JX-0011 at 5466 (emphasis added). By distinguishing the equipment of pending claims 31, 40, and 49 from equipment that is ordinarily maintained “outside of a household”—e.g., a distribution facility—the applicant characterized the claimed system such that the equipment implementing the guides, i.e., set top boxes, had to be kept and used in the household.

### (6) *In the household*

The parties do not present separate argument for the phrase “in the household.” Rather, the parties present argument for “in the household” along with the “located in a household” dispute. See Rovi Br., Section VII(C)(2)(e), Resps. Br., Section X(B)(2)(a). Accordingly, the administrative law judge does not construe this phrase separately.

### (7) *A processor configured to: receive, . . . ; receive, . . . ; and generate . . . , wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household;*

The full text of the disputed phrase follows:

. . . the plurality of user television equipment devices comprises *a processor configured to:*

receive, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide;

receive, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide; and

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generate a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides, wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household; . . .

JX-0004 at 26:38-51 (indentation appears in the claim; emphasis added). The parties have proposed the following:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No construction is necessary. This term is not subject to §112(6).	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 208-09; Resps. Br. at 237.

Rovi argues:

Claim 12 includes the clause a “processor configured to: receive . . . receive . . . and generate[.]” JX-0004 (’871 Patent) at col. 26, lns. 38-51. No construction of this clause is necessary. Respondents incorrectly contend the clause is a “means-plus-function” limitation. But because the claim language does not use the term “means,” it is presumptively not a means-plus-function limitation. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). To overcome the presumption, Respondents must “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* Respondents can demonstrate neither exception:

*First*, to a person of ordinary skill in the art, the term “processor” identifies the well-defined structure of one or more CPUs of an electronic device. CX-0004C (Delp WS) at Q/A 101; CX-1903C (Delp RWS) at Q/A 110-11; Rinard Tr. 786-89 (discussing processor limitations of Claim 12) and 849-50 (confirming the presence of processors in the accused products); JX-0004 (’871 Patent) at col. 6, lns. 58-67 (“The microprocessor 10 configures and coordinates the activities of all other components in the set-top box via two-way communication paths.”).

*Second*, by reciting a “processor,” the claim language does not simply recite a function without any structure for performing that function. *Id.* at col. 6, lns. 58-67, col. 7, lns. 38-45. The

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limitations that follow in the claim—receiving from a first IPG a first event of a first type, receiving from a second IPG a second event of a second type, and generating a list of scheduled events wherein the list is accessible for display to the first and second IPGs—define how the processor is configured. Rinard Tr. 786-89 (discussing how the processor must be configured); CX-1903C (Delp RWS) at Q/A 111.

Rovi Br. at 208-09.

Comcast argues:

The “processor” element is a means-plus-function limitation and is discussed below in the section on invalidity. Moreover, although Rovi proposes that the term does not need to be construed, Rovi’s expert Dr. Delp appears to be uncertain of what the term means. He says it would be understood to be “one or more central processing unit(s), or CPU(s), of an electronic device,” but cites no references or authority to support his argument. CX-0004C (Delp WS) at Q/A 101. In his infringement analysis, he says “the user television equipment devices (*e.g.*, ARRIS XG1v3 and Pace XiD) comprise a processor,” and points to various schematics, but only of the XG1 and XG2 devices. CX-0004C at Q/A 189. He makes no citation to the XiD device. And he makes no analysis of the “processors” he points to; rather, he merely finds a CPU and claims that it must be the required structure that performs the specified function.

Resps. Br. at 237.

Rovi replies:

The “processor configured to . . .” claim element is not a means-plus-function clause. *See Smartflash LLC v. Apple Inc.*, 2015 U.S. Dist. LEXIS 91669 at \*7-10 (E. D. Tex. 2015) (finding “processor” is not a nonce word and connotes specific structure to a person of ordinary skill in the art). Because the clause does not include the statutory “means” language, it is Respondents’ burden to prove that the clause recites function without reciting sufficient structure for performing that function. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Respondents’ Brief does not cite any evidence on this question. Rovi’s expert addressed the issue and found that the term “processor” as used in the claim corresponds to the well understood structure of one or more CPUs of an electronic device. CX-0004C (Delp WS) at Q/A 101; CX-1903C (Delp RWS) at Q/A 110-11; Rinard Tr. 786-89

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(discussing processor limitations of claim 12) and 849-50 (confirming the presence of processors in the Accused Products); JX-0004 ('871 Patent) at col. 6, lns. 58-67.

Rovi Reply at 81. Comcast replies in its invalidity arguments. *See* Resps. Reply at 78, 93.

The administrative law judge has determined that the disputed phrase is not a means-plus-function limitation because persons of ordinary skill in the art understood the disputed phrase as having sufficiently definite meaning for the claimed structure. The administrative law judge has also determined that no construction for this phrase is necessary because a processor was well-understood and because Comcast has not offered any alternative argument apart from its § 112 ¶6 argument.

Rovi's expert, Dr. Delp, offered the following testimony:

**Q101. Let's turn to the "processor configured to" term. What would a person of ordinary skill in the art have understood "processor" to mean?**

A. A person of ordinary skill in the art would have understood that the recited "processor" refers the logic circuitry that processes the various instructions that drive a computer. To a person of ordinary skill in the art, the term processor connotes the well-defined structure of one or more central processing unit(s), or CPU(s), of an electronic device.

CX-0004C (Delp WS) at Q/A 101.

Comcast does not cite the testimony of its own expert, Dr. Rinard, who offered testimony on this topic. *See* RX-0006C (Rinard WS) at Q/A 223-24. Dr. Rinard opined that the patent "does not identify a well-known structure that would have been well-understood without resort to the specification. And the specification does not provide sufficient structure." *Id.* at Q/A 224. However, Dr. Rinard also opined that:

The '871 Patent is generally directed to receiving different types of scheduled events and generating an aggregated list of those events for display. As discussed earlier, all of the technologies recited in

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the claims were well known conventional technologies as of July 29, 1998. Indeed, the specification of the '871 Patent acknowledges that interactive electronic program guides were well-known in the art. For example, JX-0004 ('871 Patent) at 1:29-43. ***The other physical components recited in the claims, including memory, processors, systems, and machine readable media are all generic components used in connection with such interactive electronic program guides that were well known in the industry and the specification.*** And the specification simply references conventional, well-known technologies that operate in their conventional and expected manner. For example, you can see this in the '871 Patent at 2:1-6 (VCR recorders), 3:45-47 (data centers and broadcasting equipment), 6:39-59 (set-top boxes, TV receivers, monitors, microprocessors, memory controllers and devices, tuners and decoders).

Receiving event types and storing them in a memory merely describes the generic functions of collecting data and storing it. The claims do not specify any particular type of memory, and the specification teaches that any type of “memory controller or direct memory access (DMA) device” can be used in the claimed invention. '871 Patent 6:46–47. Many types of memory were known in the art. Likewise, ***a shared memory that is accessible by multiple processes and/or processors was a well-known concept in the art prior to the '871 Patent and was disclosed in textbooks such as, for example, RX-0228 (Distributed Operating Systems Concepts and Design by Pradeep K. Sinha), and RX-0229 (The Design of the Unix Operating System by Maurice J. Bach).***

*Id.* at Q/A 16 (emphasis added). This testimony, which Dr. Rinard supports with citations to the specification and textbooks, shows that words of the claim would have been “understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-49 (Fed. Cir. 2015).

### (8) *First and second interactive electronic program guides*

The phrase “first and second interactive electronic program guides” appears in claims 1, 10, 12, 16, 17, 21, 23, 27, 28, and 32. The parties have proposed the following constructions:

Rovi's Proposed Construction	Comcast's Proposed Construction
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Rovi's Proposed Construction	Comcast's Proposed Construction
No construction is necessary. Alternatively, a first instance and a second instance of interactive electronic program guide.	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 209-10; Resps. Br. at 235.

Rovi argues:

... Respondents' proposed construction is contrary to the plain and ordinary meaning of the "first and second interactive electronic program guides" phrase because it relies on the incorrect contention that the interactive electronic program guides must be located in a "single set-top box." CX-0004C (Delp WS) at Q/A 102-03. As discussed in Section VII(C)(2)(a), *supra*, no limitation is mandated by the '871 Patent's intrinsic evidence.

Rovi Br. at 209-10 (introductory text presenting the constructions is omitted).

Comcast argues:

No construction is required for the "first and second" guides limitation. Any construction, however, should be applied consistently for purposes of both invalidity and noninfringement analysis. Rovi's expert Dr. Delp, however, has no hesitation arguing that the Comcast products have multiple guides, even though he has not shown that Comcast has multiple "instances" (under Rovi's proposed construction) or multiple "guides with data specific to each program guide" (under Comcast's construction). In contrast, he is quick to argue that many asserted prior art references do not have multiple guides, even when they use the word "instance," such as RX-0074 (Ellis '292). Another example is Alexander, which allows for parent and child guides that Dr. Delp argues are merely "user profiles," and not multiple guides, even though the '871 Patent specifically describes an embodiment with parent and child guides. JX-0004 at 1:49-51, 1:56-57, 5:11-15, *See also* Tr. 1219:9-1220:25.

Resps. Br. at 234.

Rovi replies:

"First and second interactive electronic program guides" should be construed by the Court such that it is clear Respondents' proposed



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“embodied in a single set-top box” limitation is excluded. The multiple, different interactive electronic program guides need not be embodied on a single set-top box. JX-0004 ('871 Patent) at col. 3, lns. 28-33 (“IPGs may reside in multiple electronic devices or set top boxes.”); Rinard Tr. 835.

Rovi Reply at 79.

Comcast replies:

Regarding the term “first and second interactive electronic program guides,” Rovi does not appear to take issue with the requirement, in Comcast’s proposed construction, that the guides must have different data. As shown in the analysis of the X1 system, each STB in the accused configuration displays the same guide information to each user.

Resps. Reply at 77.

The administrative law judge has determined that this phrase does not need construction. The parties have stated that it is not necessary to construe this phrase. Further, neither party affirmatively advocated for its own construction; rather, each party simply critiqued its adversary’s construction. Accordingly, the administrative law judge has not construed the phrase.

(9) *The first and the second interactive electronic program guides in the household*

The phrase “the first and the second interactive electronic program guides in the household” appears in claims 1 and 12.

Rovi has not presented a separate argument for this phrase. *See* Joint Outline at 15-16.

Comcast’s entire argument for this phrase follows:

The evidence and argument presented in the previous sections on “located in a household”/ “in the household” and “first and second interactive electronic program guides” applies equally to the construction of this limitation, and supports Comcast’s construction.

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Resps. Br. at 235.

The administrative law judge previously construed “located in a household” to mean “kept and used at home,” and the administrative law judge previously determined that the phrase “first and second interactive electronic program guides” does not need construction.

The administrative law judge has determined it is not necessary to construe the phrase “the first and the second interactive electronic program guides in the household” separately from its constituent parts, which have already been addressed.

(10) *A list of scheduled events of the first and second types*

The phrase “a list of scheduled events of the first and second types” appears only in the claims (*i.e.*, claims 1, 12, and 23). The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No construction is necessary. Alternatively, a list of events, including events of two different types, scheduled to take place in the future.	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 210; Resps. Br. at 237-39.

Rovi argues:

. . . Respondents propose a construction of plain and ordinary meaning which is alleged to be “a list of scheduled functions including two different categories of functions.” There is no basis for equating “first and second types” with “two different *categories* of functions” as proposed by Respondents. CX-0004C (Delp WS) at Q/A 105-06.

Rovi Br. at 210 (introductory text presenting the constructions is omitted).

Comcast argues:

The ‘871 Patent requires generation of a list for display by aggregating events of at least two different types. Rovi and Dr. Delp contend this limitation is met if accused products display series recordings and single recordings on a list of scheduled

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events. According to Dr. Delp, series recordings and single recordings are different types of events.

As an initial matter, the '871 specification treats series recordings and single recordings as the same type of event. *See* JX-0004 at 8:4-6 (“aggregate list for all individual recordings and series recordings, future PPV purchases, and scheduled tunes”). Moreover, Rovi and Dr. Delp are trying to read the claims of the '871 Patent to capture subject matter that the Patent Office has repeatedly determined is unpatentable, *i.e.*, aggregating two different recording requests from two different program guides.

Dr. Delp points to claims 19 and 20 as support for Rovi's proposed construction. Claim 20 merely makes clear that a list includes a particular kind of recording (a series recording). And claim 19 merely is making clear that the list includes recordings. There is nothing in either claim that indicates that individual and series recordings are different types of events.

Resps. Br. at 237-39 (footnote omitted).

Rovi replies:

The claim terms “a list of scheduled events of the first and second types,” “a first event of a first type,” and “a second event of second type” can be addressed together. Rovi's position on the appropriate claim construction of these terms is set forth in the Post-Hearing Brief at 210-11 and need not be repeated here. The dispute between the parties regarding these claim terms is more about the application of the parties' proposed constructions than the actual language of the constructions. In particular, the parties dispute whether scheduling the recording of an individual program is an event of a different type than scheduling the recording of a series.

No intrinsic evidence supports Respondents' claim that scheduling the recording of an individual program and scheduling the recording of a series is an event of the same type. CX-0004C (Delp WS) at Q/A 108. Col. 8, lines 4-6 of the '871 Patent supports Rovi's position that individual recordings and series recordings (items included on the aggregated scheduled list) are different events of different types. Respondents purport to rely on this passage, but then ignore the specification's distinction between individual and series recordings. *Compare* JX-0004 ('871 Patent) at col., lines 4-6 (referring to “individual recordings and series recordings”) *with* Respondents' proposed construction (referring only to “recordings”). And Dr. Rinard admitted at the hearing that

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“[a]n individual recording is one of the kinds—one of the types of recordings.” Rinard Tr. 795. Respondents also argue that Rovi is attempting to recapture subject that the Patent Office has determined to be unpatentable, but Respondents’ only evidence is from file histories other than the ‘871 Patent for claims different than those found in the ‘871 Patent. *See* RX-0237 (‘642 Patent File History); RX-0058 (14/046,200 App. File History). There is no authority cited for even considering such unrelated file histories.

Rovi Reply at 82-83 (footnote omitted).

The administrative law judge construes the phrase “a list of scheduled events of the first and second types” to mean “a list of events, including events of two different types, scheduled to take place in the future.” The construction provides additional context for understanding the phrase without enlarging or narrowing the claim scope. Comcast has not presented a cogent argument, with sufficient intrinsic or extrinsic support to warrant construing the phrase otherwise.

### *(11) A first event of a first type*

The term “a first event of a first type” appears in claims 1, 12, and 23. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
No construction is necessary. Alternatively, a first event having a first functionality.	“a designation of a scheduled function of a particular category of functions, such as reminders, recordings, pay-per-view purchases, automatic tunes, or blocks”

*See* Rovi Br. at 211; Resps. Br. at 239.

Rovi’s entire argument for this term follows:

... An example of events of different types is a series recording and an episode recording. [CX-0004C (Delp WS)] at Q/A 108. Claims 19 and 20, both dependent on claim 12, support Rovi’s proposed construction under the doctrine of claim differentiation. Rinard Tr. 797-98 (acknowledging references in Claims 19 and 20

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to “programs scheduled to be recorded,” “series recordings,” “future PPV,” and “auto tunes” as scheduled events). Under that doctrine, a limitation in a parent claim must be construed “at least broad enough to encompass the limitation in the dependent claim.” *TecSec, Inc. v. Adobe Sys.*, No. 2015-1686, 2016 U.S. App. LEXIS 15149, \*17 (Fed. Cir. Aug. 18, 2016); *Trs. of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1370 (Fed. Cir. 2016); CX-0004C (Delp WS) at Q/A 108.

Rovi Br. at 211 (introductory text presenting the constructions is omitted).

Comcast argues:

Rovi’s construction of “a first event of a first type” is overly broad and is not supported by the specification. For example, the ‘871 Patent lists “individual recordings and series recordings, future PPV purchases, and scheduled tunes” as examples of types of functions. JX-0004 at 8:4-6. In contrast to Rovi’s overly broad proposal of “a first event having a first functionality,” Comcast’s proposed construction, “a designation of a scheduled function of a particular category of functions, such as reminders, recordings, pay-per-view purchases, automatic tunes, or blocks.” is consistent with the specification.

Notably, during prosecution the applicants argued that the claims were patentable over Ellis because it only had one type of event. JX-0011.005808 (July 5, 2011 Amendment) (“At best, Ellis ‘292 and Ellis ‘527 disclose displaying events of one type (e.g., a pay-per-view program) separately from events of another type but not aggregating the two types into a single list.”). *See also* Tr. 983:6-984:2.

Resps. Br. at 239. In reply, Comcast adds:

Regarding the terms “first event of a first type” and “second event of a second type,” Rovi incorrectly states that a series recording is a different type of event from an individual recording. Rovi’s claim differentiation argument proves too much. Rovi is correct that “a parent claim must be construed at least as broad” as the dependent claim, and that is indeed the case under Comcast’s proposed construction. Under Comcast’s construction claim 12 allows for a list that has at least two of *any* of the following categories: reminders; recordings; pay-per-view purchases; autotunes; or blocks. Claim 19 requires that the list *must* include recordings. And Claim 20 requires that the list *must* include recordings that are series recordings. Thus, each dependent claim

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is narrower than claim 12, and no different interpretation is required to achieve that result. Comcast's construction does not read into Claim 12 any limitation of the dependent claims, and so there is no claim differentiation to be made. Importantly, Rovi relies solely on its own construction of the terms "first event of a first type" and second event of a second type" (wherein individual and series recordings are different types) in its alleged infringement arguments, and a proper claim construction in which *recordings* are of one type as described in the patent is dispositive of the infringement issue in Comcast's favor.

Resps. Reply at 77-78.

The administrative law judge has determined that it is not necessary to construe this phrase. The specification uses the word "type" in a ordinary manner. *See* JX-0004 at 9:65-10:1 (describing "the type of TV" and the "user's favorite types of programs" as user-specific information); 13:33-39 (describing guide formatting depends "on the type of guide being displayed"); 16:28-33 (describing the use of "different colors for several types of programming" and providing an example that "Movies are displayed on a purple background; sports are displayed on a green background; and all other shows are displayed on a blue background.")). Thus, the specification indicates the patentee used the word "type" to denote a distinction.

### *(12) A second event of a second type*

The term "a second event of a second type" appears in claims 1, 12, and 23. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No construction is necessary. Alternatively, a second event having a second functionality.	"a designation of a scheduled function of a particular category of functions, such as reminders, recordings, pay-per-view purchases, automatic tunes, or blocks"

*See* Rovi Br. at 211; Resps. Br. at 239.

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Rovi's argument for this phrase is presented with its argument for the phrase "a first event of a first type." *See* Rovi Br. at 211.

Comcast's argument for this phrase follows:

As discussed in the previous subsection, the event of a second type must be "a designation of a scheduled function of a particular category of functions, such as reminders, recordings, pay-per-view purchases, automatic tunes, or blocks." As shown above in the subsection regarding the first and second types of events, the second event must be of a different type than the first event of a first type. As explained in that subsection, two recording events are not of different types, and the evidence supports Comcast's proposed construction, not Rovi's.

Resps. Br. at 239. Comcast presents additional argument in connection with the "first event of a first type" term. *See* Resps. Reply at 77-78 (copied in the section immediately above).

The administrative law judge has determined that it is not necessary to construe this phrase. As explained in relation to the "first event of a first type" dispute, the specification uses the word "type" in an ordinary manner, to denote a distinction.<sup>117</sup> The phrase "a second event of a second type" maintains this concept of denotation.

(13) *A memory accessible to the first and second interactive electronic program guides*

The phrase "a memory accessible to the first and second interactive electronic program guides" appears in claims 1, 12, and 23. The parties have proposed the following constructions:

Rovi's Proposed Construction	Comcast's Proposed Construction
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<sup>117</sup> *See* JX-0004 at 9:65-10:1 (describing "the type of TV" and the "user's favorite types of programs" as user-specific information); 13:33-39 (describing guide formatting depends "on the type of guide being displayed"); 16:28-33 (describing the use of "different colors for several types of programming" and providing an example that "Movies are displayed on a purple background; sports are displayed on a green background; and all other shows are displayed on a blue background.").

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<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No construction is necessary. Alternatively, a memory that can be accessed by the first and second interactive electronic program guides.	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 212; Resps. Br. at 240-41.

Rovi's entire argument follows:

... No intrinsic evidence requires "a memory accessible to the first and second interactive program guides" to be limited to a particular type of memory or mechanism by which the IPG accesses the memory. CX-0004C (Delp WS) at Q/A 110. Also, as noted above in Section VII(C)(2)(a), there is no requirement in Claim 12 for the two guides to be embodied in a single set-top box.

Rovi Br. at 212 (introductory text presenting the constructions is omitted).

Comcast's entire argument follows:

With regard to the term "a memory accessible to the first and second interactive electronic program guides," Comcast's expert Dr. Rinard has opined that either construction, properly understood, is acceptable. The disagreement between Dr. Rinard's opinion and that of Rovi's expert Dr. Delp is how to properly interpret Rovi's construction. The "memory accessible to the first and second interactive electronic program guides" was added in an amendment, in an attempt to patentably improve on Ellis '292. JX-0011.006686-6697 (Feb. 21, 2012 Amendment); RDX-0511. In that amendment, the applicants argued that the claim was patentable over Ellis because Ellis "is silent on where changes made on one guide and applied to another guide are stored." JX-0011.006695. See also Tr. 981:24-982:25.

The difference between accessible memory and message-passing systems is important in the interpretation of these proposed constructions. As of July 29, 1998, the concept of distributed consistency had been intensively studied, and multiple methods and techniques were developed, in multiple areas of computer science such as distributed systems, parallel systems, computer architecture, and operating systems. See RX-0006C (Rinard WS) at Q/A 33-34. One well-known solution to this problem was to have the different guides access the same shared memory, as disclosed and discussed, for example, in prior art operating



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systems textbooks. *See, e.g.*, RX-0228.0135-136 (Pradeep Sinha's Distributed Operating Systems Concepts and Design).

Regarding the shared memory approach, one known way to implement the shared memory that the components access is to execute the guides on the same device and have the memory of that device be shared. The guides simply access the memory in the device directly. If the guides execute on different devices that do not directly share a single primary memory, it is possible to use a distributed shared memory system, which was also well-known in the art. Such a system enables guides executing on different devices to access memory on other devices using a distributed virtual shared memory system, which gives an abstraction that the different devices are sharing a single memory. *See* RX-0228.0254 (Sinha) at Fig 5.1. Under both constructions, a key aspect of a memory accessible to multiple program guides as disclosed in the '871 Patent is the use of memory addresses – a read access specifies a memory address to read, while a write access specifies a memory address to write to and the value to write into that address. *See, e.g.*, JX-0004 ('871 Pat.) at 6:64-67; *see also* RX-0204, ("Yuen") at 18:11-22 (incorporated by reference in the '871 Patent).

Under Comcast's interpretation of the claims, implementations that use some kind of message passing to obtain data would not satisfy the limitations of Claim 12 and would therefore lie outside the scope of the claims. Such implementations may or may not literally satisfy the limitations under Rovi's proposed constructions. Under Rovi's apparent interpretation of its constructions for purposes of infringement, however, use of a message passing protocol to obtain event data from a remote server literally falls within the scope of the Asserted Claims.

Dr. Delp argues that the memory is "accessible" even if the guide cannot read and write to the memory in the manner explained above. Under Dr. Delp's constructions and interpretations, the claimed memory does not have to be accessible to the guides, as long as the guides manage to obtain the information via some mechanism (whether that mechanism involves accessible memory or not). This interpretation of the claim term directly contradicts Rovi's proposed construction of this term, which requires the memory to be accessible to the guides.

Resps. Br. at 240-41. In its reply, Comcast adds:

Regarding the term "a memory accessible to the first and second interactive program guides," Rovi's proposed construction would

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be acceptable, if it were properly applied. Yet Rovi applies it to systems in which no memory is accessible to either guide, as required by the '871 Patent. *See, e.g.*, JX-0004 ('871 Pat.) at 6:64-67; *see also* RX-0204, ("Yuen") at 18:11-22 (incorporated by reference in the '871 Patent). The intrinsic evidence requires that the memory, whether it is shared or not, is accessible—that is, can be read from and written to.

Resps. Reply at 78.

The administrative law judge construes "a memory accessible to the first and second interactive electronic program guides" to mean "a memory that can be accessed by the first and second interactive electronic program guides." The construction provides additional context for understanding the phrase without enlarging or narrowing the claim scope. Comcast has not presented a cogent argument, with sufficient intrinsic or extrinsic support, to warrant construing the phrase otherwise.

(14) *Generate a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides*

The phrase "generate a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides" only appears in claim 12. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No construction is necessary. Alternatively, generate a list of scheduled events of the first and second types by combining the first and second scheduled events received from the first and second interactive electronic program guides.	Comcast does not clearly present a construction in its post-hearing brief.

*See* Rovi Br. at 212-13; Resps. Br. at 241-42.

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Rovi's entire argument for this term follows:

. . . There is no need to construe this term, but Respondents' proposed alternative construction goes far beyond the plain and ordinary meaning of "generate." CX-0004C (Delp WS) at Q/A 114. As discussed, *supra* Sections VIII(C)(2)(e), (h), the "first and second electronic program guides" need not be "kept and used in the same home," and there is no intrinsic support for "a single combined list" that includes "different categories of requests."

Rovi Br. at 213 (introductory text presenting the constructions is omitted).

Comcast argues:

With regard to the term "generating a list of scheduled events of the first and second types by aggregating the first and second schedule events received from the first and second interactive electronic program guides," the guides must be located "in the household" (and not on a server), and the first and second events must be different types (instead of recordings of two programs as part of a series or as an individual episode). These are the main points of contention between the parties with respect to the claim construction of this term. As described above in the subsections on first and second program guides and "in the household," the evidence supports Comcast's construction: "combining separate scheduled events provided by two different program guides (that are kept and used in the same home) into a single combined list that includes two different categories of requests."

Resps. Br. at 241-42. In reply, Comcast adds:

Regarding the term "generate a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides," Rovi argues that there is "no intrinsic support for 'a single combined list' that includes 'different categories of requests.'" Compl. PoHB at 213. Respondents respectfully point to the very intrinsic claim language itself, which claims "*a list of scheduled events of the first and second types by aggregating the first and second schedule events . . .*"

Resps. Reply at 78 (emphasis in original).

The administrative law judge has determined it is not necessary to construe this phrase separately from its constituent parts, which have already been construed. Indeed, the parties

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indicate that the dispute over this phrase is an extension of the disputes pertaining to the phrase's constituent parts. Further, the only new words in this phrase are "generate" and "aggregating," and the parties' proposed constructions with regard to these words are not debated in the briefs. Thus, this phrase does not need to be construed.

### 3. Representative Products

Rovi's entire argument is:

Accused X1 Guide Products for the '871 Patent are models of set-top boxes capable of running the X1 Guide that meet the legal requirements of importation, sale, or lease to Comcast or Comcast's customers in the United States on or after April 1, 2016: Pace/ARRIS XG1 v3 (X1) PX013ANM, ARRIS XG1 v3 (X1) AX013ANM, Pace/ARRIS XG1 v3 (X1) PX013ANC, ARRIS XG1 v3 (X1) AX013ANC, Pace/ARRIS XG2 v2 (X1) PX022ANM, Pace/ARRIS XG2 v2 (X1) PX022ANC, Pace/ARRIS XiD (X1) PXD01ANI-X1, and Technicolor/Cisco XiD (X1) CXD01ANI (together, '871 Patent Accused Products). CX-0004C (Delp WS) at Q/A 5, 117; Joint Outline at Table 1.

Each set-top box running the X1 Guide works in materially the same way for purposes of infringement. CX-0004C (Delp WS) at Q/A 118; *see also* CX-1885 (Xfinity on X1 Platform) (including same set of instructions for the X1 Guide without regard to the particular model of set-top box). [

] *Id.*; JX-0081C (Comcast/ARRIS Master Supply Agreement) at 33; JX-0096C (Folk Dep. Tr.) 95-98; JX-0105C (McCann Dep. Tr.) 84-85. There are no differences between the X1 set-top boxes or X1 Guides running on X1 set-top boxes relevant to infringement of the '871 Patent. CX-0004C (Delp WS) at Q/A 118-20; JX-0105C (McCann Dep. Tr.) 87-88. For example, no difference between set-top boxes related to the [ ] or model affects the '871 infringement analysis. CX-0004C (Delp WS) at Q/A 120. Throughout his testimony at the hearing, Dr. Rinard made no distinction between any models of set-top box and agreed that for the purposes of infringement, the relevant devices operated in the same manner. Rinard Tr. 801-03. Because there are no material differences between the different X1 set-top boxes, the ARRIS XG1 v3 (X1) AXo013ANC is representative of the operation of all such products. CX-0004C

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(Delp WS) at Q/A 120. The Technicolor/Cisco XiD (X1) CXD01ANI is representative of the non-DVR X1 set-top boxes. *Id.* at Q/A 186.

Rovi Br. at 213-14.

Comcast argues:

The STBs that Rovi accuses of infringement of claims 12, 17, and 18 of the '871 Patent are listed in JX-0084C.000035-37. The Accused X1 STBs use the following processors: [

] Dividing the products up into representative categories by the model of processor used is necessary because the "processor" element of the asserted claims is a means-plus-function limitation. Rovi has not shown that these various processors are representative of each other.

Additionally, DVR functionality is a fundamental element of the asserted claims and Rovi has used examples of DVR recordings extensively in its infringement allegations. Rovi has not made any showing that the combination of the particular DVR and non-DVR STBs analyzed in its infringement analysis is representative of other combinations. Specifically, the accused products vary by DVR capabilities, as follows: [

] Rovi has not shown that the combination it has analyzed is representative of any other combinations. . . .

Resps. Br. at 230-31 (reproduction of RX-0870C.0006 omitted; emphasis in original). The two exhibits Comcast cites to support its argument, JX-0084C and RX-0870, were created by the parties' counsel and do not contain evidentiary support. Further, Comcast has not pointed to any testimony to contest that the products Rovi identified are representative.

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Accordingly, the administrative law judge has determined that Rovi has presented sufficient evidence, and that Comcast has not rebutted this evidence. *See Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010) (“Appellants contend that the ALJ improperly shifted the burden to Appellants to establish that the non-modeled accused packages would behave differently than those that were modeled. Rather than improper burden shifting, the ALJ properly found that Appellants simply failed to rebut the substantial evidence set forth by Tessera.”); *see also TiVo, Inc. v. EchoStar Commc'ns Corp.*, 516 F.3d 1290, 1308 (Fed. Cir. 2008). Thus, the administrative law judge finds that the ARRIS XG1v3 AX013ANC is representative of DVR-enabled set-top boxes and that the Pace XiD (PXD01ANI) is representative of the non-DVR X1 set-top boxes.<sup>118</sup> *See* CX-0004C (Delp WS) at Q/A 117, 120, 186.

### 4. Literal Infringement

Rovi asserts Claims 12, 17, and 18 of the '871 Patent in this Investigation. Rovi Br. at 214; CX-0004C (Delp WS) at Q/A 6. Claim 12 is an independent claim, claim 17 is dependent on claim 13, which depends on claim 12. Claim 18 is dependent on claim 12.

#### a) Claim 12

Claim 12, with bracketed, alphanumeric claim limitations provided by Rovi, follows:

[12pre] 12. A system for displaying interactive electronic program guides, the system comprising:

[12a] a plurality of user television equipment devices that are located in a household and from which first and second interactive electronic program guides are accessible, wherein the plurality of user television equipment devices comprises a processor configured to:

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<sup>118</sup> Rovi's brief references the Technicolor/Cisco XiD (X1) CXD01ANI, while Dr. Delp's witness statement discusses the Pace XiD (PXD01ANI). *Compare* Rovi Br. at 214 *with* CX-0004C (Delp WS) at Q/A 186.

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[12b] receive, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide;

[12c] receive, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide; and

[12d] generate a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides, wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household; and

[12e] a memory accessible to the first and second interactive electronic program guides for storing the received first and second events.

JX-0004 at 26:32-54.

### (1) *Limitation 12pre*

The text for this limitation is “12. A system for displaying interactive electronic program guides, the system comprising[.]” *See* Rovi Br. at 215.

Rovi argues:

To the extent the preamble is a limitation, the ‘871 Patent Accused Products are systems for displaying interactive electronic program guides. CX-0004C (Delp WS) at Q/A 186. The relevant system is Comcast’s AnyRoom DVR system which includes a DVR enabled set-top box (such as the ARRIS XG1v3 (AX013ANC)) capable of running an instance of the X1 Guide and a non-DVR set-top box (such as the Pace XiD (PXD01ANI)) capable of running another instance of the X1 Guide. *Id.* at Q/A 186-87; Rinard Tr. 792; CX-1776C (described by Dr. Rinard at Rinard Tr. 800 as a representation of the X1 system); *see also* CX-1296C (Xfinity X1 AnyRoom DVR Overview); CX-1253C (X1 AnyRoom DVR). An IPG instance on a DVR enabled set-top box (*e.g.*, the XG1) is shown at CX-1632 (X1 Screenshots for the ‘871 Patent) at 3, and an IPG instance on a non-DVR enabled set-top box (*e.g.*, the XiD) is shown at CX-1632 (X1 Screenshots for the ‘871 Patent) at 2.

Rovi Br. at 215 (footnote omitted).

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Comcast argues that the “accused products do not include the ‘first and second interactive electronic program guides’ that are in every element of claim 12 (12pre-12e).” Resps. Br. at 245.

The administrative law judge previously determined that the preamble is not limiting and that no construction is necessary. *See* Section IV(D)(2)(b)(1).

However, if the preamble is found to be a limitation, then the limitation is met because the accused products constitute a system that displays multiple electronic program guides, as discussed in relation to limitation 12a.

### (2) *Limitation 12a*

The text for this limitation is “a plurality of user television equipment devices that are located in a household and from which first and second interactive electronic program guides are accessible, wherein the plurality of user television equipment devices comprises a processor configured to[.]” *See* Rovi Br. at 216.

Rovi argues:

. . . Comcast’s AnyRoom DVR system and the ‘871 Patent Accused Products include at least two television equipment devices (*e.g.*, the ARRIS XG1v3 and Pace XiD) located and/or placeable in a household and from which first and second X1 IPGs are accessible. CX-0004C (Delp WS) at Q/A 189. There is no dispute that the ‘871 Patent Accused Products are placeable in a household following importation. Rinard Tr. 791-792 (testifying about the intended use of the AnyRoom DVR system), 800 (discussing CX-1776C as a representation of the accused X1 system); CX-1776C (depicting the presence of the ‘871 Patent Accused Products in a household).

Rovi Br. at 216.

Comcast argues that the accused products do not contain even one interactive program guide, because the program guides are [

] *See* Resps. Br. at 245-47.



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The administrative law judge has determined that Rovi has shown that the accused products meet this limitation, which requires that the system include (a) user television equipment devices, (b) that are located in a household, (c) which allow access to first and second guides, and (d) a processor. Each sub-limitation is discussed below.

### *(a) User television equipment devices*

There is no substantive dispute that the XG1 and XiD set-top boxes are the user television equipment devices. *See* CX-0004C (Delp WS) at Q/A 186, 189 (identifying the AX013ANC and PXD01ANI boxes); RX-0849C (Rinard RWS) at Q/A 88 (discussing the XG1 and XiD, without contesting the “user television equipment devices” requirement).

The administrative law judge has determined that the accused products meet this sub-limitation.

### *(b) Located in a household*

There is no substantive dispute that the set-top boxes themselves are located (kept and used) in a household. *See* CX-0004C (Delp WS) at Q/A 189; Tr. 792 (Dr. Rinard testifies that a standard X1 system includes multiple boxes in the home); *see generally* Resps. Br., Section X(C)(2)(b)(ii) (this section argues that the processor is not “in the household;” the set-top boxes are not addressed). Accordingly, the administrative law judge has determined that the accused products meet this sub-limitation.

### *(c) First and second guides*

The parties disagree whether the accused products include first and second guides.

The ‘871 Patent explains that “a major advantage of the IPG in the multi-source architecture” is “allowing users to use multiple (three as an example) instances of the IPG simultaneously.” JX-0004 at 8:49-52. The patent also discloses “independent instances” of an

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IPG and “interdependent IPGs.” *Id.* at 5:42-45. The patent further explains that one advantage of deploying three IPGs is that “users can view three different channels simultaneously.” *Id.* at 8:53.

Dr. Delp opined that a user can access one guide with the XG1 (DVR) set-top box and another instance of the guide with a non-DVR set-top box. *See* CX-0004C (Delp WS) at Q/A 189-90 (discussing CX-1632); CX-0005C (J. Williams WS) at Q/A 114 (“CX-1632.000002 [is] a picture of the guide on the non-DVR STB; CX-1632.000003 [is] a picture of the guide on the DVR STB”); CX-1632 at 2-3; *see also* Tr. 853-54 (Dr. Rinard testified that users can schedule recordings from different rooms in a household).

Accordingly, the evidence shows that first and second guides are accessible from the set-top boxes, which is all this sub-limitation requires. Thus, the administrative law judge has determined that the accused products meet this sub-limitation.

### *(d) A processor*

There is no disagreement that a physical processor is located in the XG1 set-top box, which is kept and used in the household. Dr. Delp explained that the accused products have a processor:

. . . Furthermore, the user television equipment devices (*e.g.*, ARRIS XG1v3 and Pace XiD) comprise a processor. This is shown in CX-1305C (Pace- XG1v3 Multi-Tuner Video Gateway) at p. 2, CX-1353C (XG1v3 Main Board Schematic) at p. 2; CX-1317C (Comcast- HW Specification for XG 1 and XG2 STB Products) at p. 36.

CX-0930C provides detailed claim charts with specific infringement evidence for this limitation.

CX-0004C (Delp WS) at Q/A 189. Dr. Rinard testified that Dr. Delp identified a processor in the XG1 set-top boxes. RX-0849C (Rinard RWS) at Q/A 88 (“ . . . The processor in the XG1,

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which is the only processor Dr. Delp appears to be pointing to, [

] as I have testified earlier.”). Dr. Rinard’s comments about [ ] pertain to the “configured to” language and are addressed in limitation 12d below. Accordingly, the administrative law judge has determined that the accused products meet this sub-limitation.

In sum, the administrative law judge has determined that the accused products meet limitation 12a.

### (3) *Limitations 12b and 12c*

The text for limitation 12b is “receive, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide[.]” *See* Rovi Br. at 217. The text for limitation 12c is “receive, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide[.]” *Id.*

Rovi presents a joint argument for limitations 12b and 12c. *See* Rovi Br. at 217-19.

Comcast also present a joint argument that contends the accused products do not contain first and second guides and that the processor in the set-top boxes does not [

] *See* Resps. Br. at 248. Comcast contends a “key press” from a remote control, a recording command from the [ ] and a graphics command to display a recording screen are not “events.” *Id.* at 248-51.

The language of limitations 12b and 12c is not complex or detailed. *See* Resps. Br. at 262 (Comcast argued that “Claim 12 of the ‘871 Patent is representative . . . and requires taking data from two sources (a first and second interactive electronic program guide) and combining them together to “generate a [single] list of scheduled events.”). The processor must receive events (*e.g.*, recordings) from first and second guides. Limitations 12b and 12c (and the ‘871

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Patent) involve generic, functional outcomes, not particularized schemes used to achieve those outcomes. The evidence shows that the processor receives input associated with a recording.

For limitation 12b, Dr. Delp opined that:

The ARRIS XG1v3 contains a processor that is [

] as shown, for example, by CX-1410C (XCAL DVR Messaging Functional Specification) at p. 13.

...

The recording command is [

] Accordingly, the AnyRoom DVR system meets this claim limitation.

CX-0004C (Delp WS) at Q/A 192. For limitation 12c, Dr. Delp opined that:

The second X1 IPG is configured to [

] as discussed in 12b above.

*Id.* at Q/A 196.

The administrative law judge has determined that the accused products meet limitations 12b and 12c.

*(4) Limitation 12d*

The text for this limitation is “generate a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides, wherein the list of scheduled events is accessible for

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display from any of the first and the second interactive electronic program guides in the household[.]” *See* Rovi Br. at 219.

Rovi argues that there is no dispute that the AnyRoom DVR system generates and displays a single list or recordings and that the list can be seen from “any of the subscriber’s devices.” Rovi Br. at 220.

Comcast argues, *inter alia*, that “the XG1 processor [

]

Executing graphics commands to create an image does not combine [*i.e.*, generate by aggregating] received events as Claim element 12d requires.” Resps. Br. at 252.

The administrative law judge has determined that Rovi has not shown that the accused products meet this limitation, which requires (a) that the processor generate a list of scheduled events by aggregating events from the first and second guides, (b) that the aggregated list is available for display by the first and second guides, and (c) that the first and second guides are in the household. Each sub-limitation is discussed below.

(a) *Generate a list of scheduled events by aggregating events from the first and second guides*

Limitation 12d requires the processor to generate a list of scheduled events. Dr. Delp opined that:

... scheduled recordings of single episodes (purple) and series (red) start at the STB, are relayed through Comcast’s servers, and are ultimately sent back to the STB, forming an aggregate list of scheduled series and episode recordings. The round-trip transmission of series and episode recordings is the same, regardless of whether the set-top that instigates the scheduled recording is a DVR or non-DVR set-top.

CX-0004C (Delp WS) at Q/A 201. In Q/A 202, Dr. Delp opined that “code flow for combining series and episode recordings into one aggregate list in the Scheduler is depicted in CDX-

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6063[.]” At the hearing, however, Dr. Delp testified that this code [

Q.

A.

Q.

A.

Q.

A

]

Tr. 989.

Further, the “screen shots” that Dr. Delp relies upon, CX-004C at Q/A 203, simply shows that the X1 system [

] not generating an aggregated list.

The administrative law judge has determined that Rovi has not shown that the accused products meet this sub-limitation.

(b) *The aggregated list is available for display from the first and second guides*

The claim language is not complex or detailed, nor is it limited to a particularized scheme involving recording commands, source code, and software execution, as Comcast argues.

The evidence shows that the aggregated list is available for display on both guides. *See* CX-0004C (Delp WS) at Q/A 203; CX-0005C at Q/A 114-15; CX-1632 at 12, 37.

The administrative law judge has determined that the accused products meet this sub-limitation.

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### (c) *First and second guides are in the household*

Rovi argues that the first and second guides satisfy this sub-limitation because “the list of scheduled events is accessible for display in the household from any of the first X1 IPG (implemented on the ARRIS XG1v3 set-top) and the second X1 IPG (implemented on the Pace XiD set-top).” See CX-0004C (Delp WS) at Q/A 201. This argument materially rearranges the order of the claim language such that the first and second guides would not be required to be “in the household.” As explained above, during prosecution, the applicant argued that:

Applicants’ claims 31, 40, and 49 patentably improve upon Ellis by receiving scheduled events from a first and second one of a plurality of interactive electronic program guides ***that are each in the household.*** In particular, in Ellis, program listings and other information (e.g., advertisements, paid programming) (i.e., the alleged program information received from interactive program guides) are received from one or more distribution facilities that are outside of a household (Ellis ¶¶ 63 and 67) and ***not from first and second interactive electronic program guides that are in the household.***

JX-0011 at 5466 (emphasis added). Rovi’s argument conflicts with arguments made to obtain the ‘871 Patent.

As Comcast repeatedly argued, and as the evidence shows, the first and second program guides do not reside and execute (e.g., are kept and used at home) [

] See RX-0849C (Rinard RWS) at Q/A 78, 80, 83, 88, 111; Tr. 838-839.

The administrative law judge has determined that Rovi has not shown that the accused products meet this sub-limitation.

### (5) *Limitation 12e*

The text for this limitation is “a memory accessible to the first and second interactive electronic program guides for storing the received first and second events.” See Rovi Br. at 221.

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Rovi argues that the “ARRIS XG1v3 set-top box includes [

] Rovi Br. at 221 (citing CX-0004C (Delp WS) at Q/A 206-07; CX-1632 (X1 Screenshots for the ‘871 Patent) at 18, 21-22).

Comcast argues that [

] *See*

Resps. Br. at 254.

The administrative law judge construed “a memory accessible to the first and second interactive electronic program guides” to mean “a memory that can be accessed by the first and second interactive electronic program guides.”

A “Product Overview” of Comcast’s AnyRoom DVR explains that:

With AnyRoom DVR, all of the DVR features become available on all of the X1 Platform devices in your home, even if they aren’t all DVR devices. Both the primary DVR and companion boxes have the ability to playback recordings simultaneously, whether it is the same program or up to 4 different programs. Users can also actively manage the settings of completed recordings as well as delete them from any companion box or the primary DVR.

CX-1253C at 1-2; *see also* CX-0004C (Delp WS) at Q/A 206. Thus, evidence shows that the accused products have a memory that is accessible to more than one guide.

The administrative law judge has determined that the accused products meet this limitation.

### ***b) Claims 13 and 17***

Dependent claims 13 and 17 follow:

- 13. The system defined in claim 12, wherein a given interactive electronic program guide in the household is configured to allow a user to select a program for recording.



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- 17. The system defined in claim 13, wherein the first and second interactive electronic program guides that are in the household are configured to allow the user to cancel the recording of the selected program.

JX-0004 at 26:55-57, 27:7-10.

Rovi argues that the accused products allow the user to select and cancel a recording from the first and second guides. *See* Rovi Br. at 222.

Comcast relies on its arguments about claim 12 to argue that claims 17 and 18 are not infringed. *See* Resps. Br. at 155 (“As discussed above with regard to Claim 12, because the XG1 and XiD STBs [

]

The evidence shows that if claim 12 is infringed, then claim 17 is also infringed. *See Ferring*, 764 F.3d at 1411.<sup>119</sup> Comcast product literature explains that in “AnyRoom DVR, you can use your RNG-150(s) [the companion box] as a Digital Video Recorder (DVR). Recording, deleting and playing back recorded programs is as simple using your on-screen guide, just like the XG1.” CX-1253C at 1; *see also* CX-0004C (Delp WS) at Q/A 211.

### *c) Claim 18*

Claim 18 recites “18. The system defined in claim 12, wherein the processor is configured to allow the user to obtain additional information for any item on the list of scheduled events.” JX-0004 at 27:11-13.

Rovi cites to CX-1632 at 28 as an example of a guide showing “additional information.” The ‘871 Patent identifies “plot” as an example of additional information. JX-0004 at 4:30-32

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<sup>119</sup> In *Ferring*, the Federal Circuit found a dependent claim not infringed because its corresponding independent claim was not infringed. *Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) (“Because we hold that the asserted independent claims of Ferring’s patents are not infringed, the asserted dependent claims are likewise not infringed.”)).

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(“Each IPG can be configured so that users can see additional information, such as plot, actors, and rating for a program by pressing the INFO or SELECT keys while viewing a guide.”).

CX-1632 at 28 shows a plot summary of the “Swuit” episode of New Girl. Accordingly, the evidence shows that if claim 12 is infringed, then claim 18 is also infringed. *See Ferring*, 764 F.3d at 1411.

### *d) Alternative Design*

Comcast’s entire argument is:

Moreover, Comcast has already formulated an alternative software design that cannot infringe the ‘871 Patent even using Dr. Delp’s constructions and interpretations. [

]

RX-0849C (Rinard RWS) at Q/A 152.

Resps. Br. at 256.

The administrative law judge has determined that the alternative design Comcast has identified is too hypothetical to adjudicate. No testimony indicates that the alternative design is a finalized product or sufficiently described for consideration by the Commission. *See* RX-0849C (Rinard RWS) at Q/A 152; CX-0004C (Delp WS) at Q/A 244-49.

### **5. Indirect Infringement**

In the event that the accused products are found to infringe the ‘871 Patent, the administrative law judge has analyzed Rovi’s inducement and contributory infringement arguments.

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### *a) Knowledge of the '871 Patent and Specific Intent to Infringe*

The administrative law judge finds that Comcast had the requisite intent and knowledge of the '871 Patent for the same reasons provided in the discussion of the '556 Patent above. *See* Section IV(A)(5)(a).

### *b) Induced Infringement of the '871 Patent*

#### *(1) Comcast's Customers*

Rovi has not sufficiently shown that customers actually utilize the accused products—the XG1 and XiD boxes—in an infringing manner. *See* Rovi Br. at 224 (citing CX-0004C (Delp WS) at Q/A 128-31 (Dr. Delp's testimony pertains to two patents and does not specify what accused products he is addressing)); *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033-34 (Fed. Cir. 2002) (explaining the rule that “[u]pon a failure of proof of direct infringement, any claim of inducement of infringement also fails” and then reversing summary judgment of no infringement based upon evidence that the defendant demonstrated the product to prospective buyers).

#### *(2) Comcast's Suppliers*

Rovi argues that Comcast induces ARRIS and Technicolor to infringe the asserted claims by purchasing the boxes made by ARRIS and Technicolor and by causing ARRIS and Technicolor to import the accused boxes. *See* Rovi Br. at 223-24.

Comcast argues:

... the ARRIS and Technicolor respondents cannot directly infringe the asserted claims of the '871 Patent, for all of the reasons discuss above in the analysis regarding direct infringement. Moreover, Rovi has accused one Technicolor product of infringement in this matter, the Technicolor/Cisco XiD (a/k/a XiD-Z/X1 or CXD01ANI, with Product Identification ITQ8122P-XIDKIT-K9) (the “XiD”). Rovi's infringement reads require more than one product. Neither ARRIS nor Technicolor

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import, or sell after importation, the electronic program guide for the X1 platform. The X1 STBs provided by ARRIS and Technicolor only [

] which are not an electronic program guide, because it does not contain the intelligence for providing program listings, or allowing users to select programs for viewing or recording. As described repeatedly, the X1 platform is [

] Claim 12 recites a processor as part of the claimed system. Rovi and Dr. Delp have not demonstrated that the “processor” is imported, or sold after importation by ARRIS or Technicolor. As discussed above in the section on direct infringement, the relevant functionality is found on remote hardware, not on any ARRIS or Technicolor STB.

Resps. Br. at 256.

The administrative law judge has determined that ARRIS and Technicolor do not directly infringe the asserted claims for the same reasons that Comcast does not directly infringe the asserted claims.

### *c) Contributory Infringement of the ‘871 Patent*

To prevail on a contributory infringement claim, a complainant must show that, *inter alia*, the accused product is “not a staple article or commodity of commerce suitable for substantial noninfringing use[.]” See 35 U.S.C. § 271(c); *Fujitsu*, 620 F.3d at 1326 (“To establish contributory infringement, the patent owner must show the following elements relevant to this appeal: 1) that there is direct infringement, 2) that the accused infringer had knowledge of the patent, 3) that the component has no substantial noninfringing uses, and 4) that the component is a material part of the invention.”).<sup>120</sup>

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<sup>120</sup> See also Section III(C)(2)(b) (general principles of law) and Section IV(A)(5)(b) (citing *In re Bill of Lading Transmission*, 681 F.3d at 1338; *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d at 1327; *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d at 851), *supra*.

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The administrative law judge has determined that Rovi has fallen short of meeting its burden of showing that the accused products have no substantial non-infringing uses; rather, the evidence shows that the accused X1 products have many substantial non-infringing uses, such as watching television programs. *See* RX-0848C (Grimes RWS) at Q/A 152 (the last paragraph of Dr. Rinard's testimony about an alternative design is afforded no weight).

Further, Rovi's expert testified that having a single, primary box alone would not support an infringement claim:

Q. Isn't it true that a Comcast subscriber who has a DVR box alone can't infringe the '871 Patent?

A. Well, the analysis I provided required two boxes.

Q. So if a Comcast subscriber is in home with only a DVR box, they don't infringe?

A. I believe that's correct.

Q. And if a subscriber in his house has a non-DVR box alone, they don't infringe?

A. I believe that's correct. Although the boxes are capable of infringing, sure.

Tr. 988. Thus, the sale of a primary set-top box alone would not constitute contributory infringement.

### **6. Domestic Industry – Technical Prong**

Rovi identifies the following DI products:

- 1) Rovi i-Guide combined with Rovi TotalGuide xD system,
- 2) Rovi Passport system (including Rovi Passport combined with Rovi TotalGuide xD system), and
- 3) Verizon FiOS system.

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Rovi Br. at 230 (citing CX-0004C (Delp WS) at Q/A 330). The systems are addressed below in relation to the “generate a list by aggregation” and “in the household” limitations of claim 12.<sup>121</sup>

*a) Claim 12*

*(1) Limitation 12d – “generate a list . . . by aggregating . . . events”*

*(a) Rovi i-Guide*

Rovi has not shown that the Rovi i-Guide set-top boxes include a processor that is configured to “generate a list of scheduled events . . . by aggregating the first and second scheduled events[.]”

Rovi’s brief cites to CX-0004C (Delp WS) at Q/A 360, which follows:

**Q360. How is this element met by an i-Guide and TotalGuide xD system?**

A. [

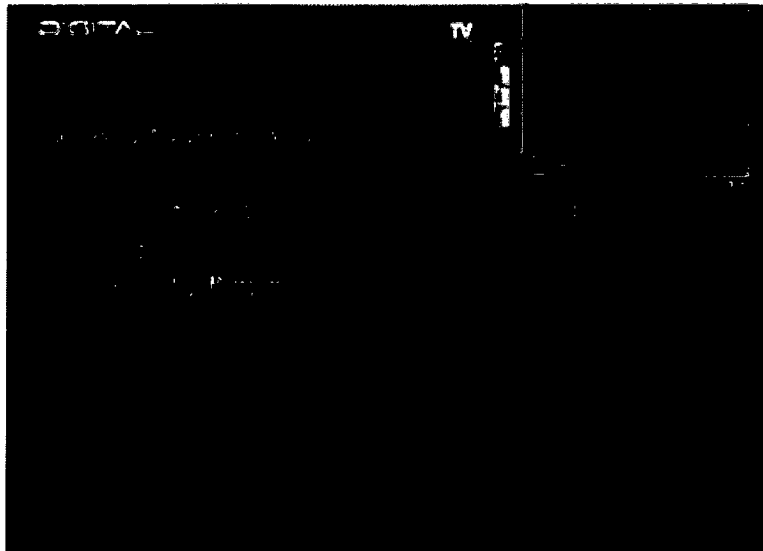
] The aggregate list is accessible for display from the i-Guide IPG and TotalGuide xD IPG.

For example, the aggregate list is displayed on an i-Guide IPG, as shown in CDX-0680.11 , below.

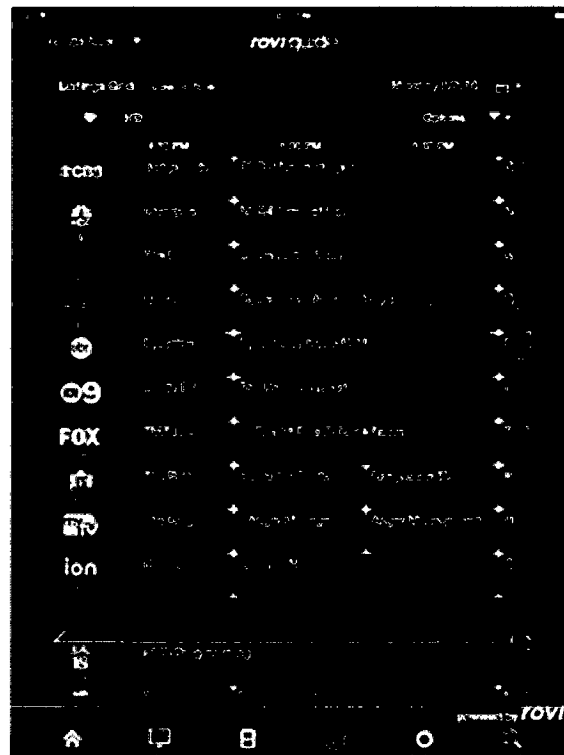
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<sup>121</sup> With regard to the X1 system, the administrative law judge determined that Rovi had not shown that the X1 products infringed claim 12 because it had not shown the X1 products had a processor configured to “generate a list of scheduled events by aggregating events from the first and second guides” or that the first and second guides were in the household.

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The TotalGuide xD also displays the aggregate events, as shown in CDX-0680.12, below. In the below example, the series recording is identified by three overlapping red dots, while the episode recording is identified by a single red dot.



This is further shown in CX-1596. Additionally, CX-1768C and CDX-0680C provide detailed claim charts with additionally specific domestic industry evidence for this limitation.

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The cited testimony does not explain how the processor in the set-top boxes generates a list by aggregating events from two guides. Indeed, Rovi's argument equates displaying an aggregated list, which is a separate requirement of limitation 12d, with generating the list. *See* RX-0849C (Rinard RWS) at Q/A 160-61 ("Claim element 12d requires the processor to be configured to generate a list by aggregating the received events. . . . Dr. Delp provides no evidence that any lists are aggregated from the received events[.]". Thus, Rovi has not shown that the processor generates the list by aggregating event selections from the first and second guides.

### *(b) Rovi Passport*

Rovi cites CX-0004C (Delp WS) at Q/A 361-62 in support of its contention that the Passport system (with and without TotalGuide xD) satisfies this limitation. Q/A 361-62 essentially replicate the testimony given for the i-Guide, albeit with a different product name and pictures.

The administrative law judge has determined that Rovi has not shown that the Passport products have a processor that is configured to "generate a list . . . by aggregating" event selections from the first and second guides. The Passport products (with and without Total Guide) do not satisfy this limitation for the same reasons that the i-Guide products do not satisfy this limitation.

### *(c) Verizon FiOS*

Rovi cites CX-0004C (Delp WS) at Q/A 365 in support of its contention that the FiOS products practice claim 12, limitation 12d. Q/A 365 follows:

**Q365. How is this element met by a Verizon FiOS system?**

A. [



CX-1773C and CDX-0685C provide detailed claim charts with specific domestic industry evidence for this limitation. Furthermore, CX-1626 provides screenshots of the list being accessible for display from a FiOS IPG.

The cited testimony does not explain how the processor in the set-top boxes generates a list by aggregating events from two guides. Indeed, Rovi's argument equates displaying an aggregated list, which is a separate requirement of limitation 12d, with generating the list. *See* RX-0849C (Rinard RWS) at Q/A 160-61 ("Claim element 12d requires the processor to be configured to generate a list by aggregating the received events. . . . Dr. Delp provides no evidence that any lists are aggregated from the received events[.]" Thus, Rovi has not shown that the processor generates the list by aggregating event selections from the first and second guides.

Thus, Rovi has not shown that the Verizon products satisfy this limitation.

(2) *Limitation 12d – "in the household"*

(a) *Rovi i-Guide*

Rovi's brief argues that the primary and companion set-top boxes meet the "in a household / in the household" requirements.

As with the X1 products accused of infringement, Rovi has not shown that the first and second program guides reside and execute (*e.g.*, are kept and used at home) on the identified set-top boxes/iPads. *Compare* RX-0849C (Rinard RWS) at Q/A 160-61 ("Because the asserted claims involve aspects of the X1 system or media that are not apparent in the user interface alone, an analysis of the user interface, without an analysis of the internal structure and behavior of the system, is not sufficient to show that a system practices the asserted claims.") *with* RX-0849C (Rinard RWS) at Q/A 78, 80, 83, 88, 111; Tr. 838-839 (Dr. Rinard's non-infringement analysis for the X1 products, which analyzed the products beyond the user interface).

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### *(b) Rovi Passport*

The administrative law judge has determined that Rovi has not shown that the Passport products have first and second guides that reside and execute (*e.g.*, are kept and used at home) on the identified set-top boxes/iPads. The Passport products (with and without Total Guide) do not satisfy this limitation for the same reasons that the i-Guide products do not satisfy this limitation.

### *(c) Verizon FiOS*

The administrative law judge has determined that Rovi has not shown that the Verizon products have first and second guides that reside and execute (*e.g.*, are kept and used at home) on the identified set-top boxes. The Verizon products do not satisfy this limitation for the same reasons that the i-Guide and Passport products do not satisfy this limitation.

### *b) Claims 13, 17, and 18*

Comcast has not challenged Rovi's assertion that the domestic industry products practice claims 13, 17, and 18. *See generally* Resps. Br., Section X(D).

The evidence shows that if the domestic industry products practice claim 12, then they also practice claims 13, 17, and 18. *See* CX-0004C (Delp WS) at Q/A 374-76, 379, 381-83, 386, 388-90, 393; *Cf. Ferring*, 764 F.3d at 1411.

## **7. Patent Eligibility**

Under step one of the *Alice* framework, Comcast argues:

The claims of the '871 Patent are directed to the abstract idea of receiving different types of scheduled events and then generating an aggregated list of those events for display. RX-0006C (Rinard WS) Q/A 16. Claim 12 of the '871 Patent is representative of the asserted claims and requires taking data from two sources (a first and second interactive electronic program guide) and combining them together to "generate a [single] list of scheduled events."

The concept of receiving data and organizing it is plainly directed to an abstract idea. . . .

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...

The '871 Patent does not claim to have invented a system for displaying interactive electronic program guides, but rather the claims are directed to an idea for how to use such a system with generic computer technology. See *Certain Activity Tracking Devices*, Inv. No. 337-TA-963, Order No. 40 (Mar. 3, 2016) at 22-23. The Federal Circuit has made clear that claiming the use of existing devices in purely functional ways, as the claims of this patent do, is insufficient to meet the requirements of § 101. *TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016) (finding claims invalid as the specification “[did] not describe a new telephone, a new server, or a new physical combination of the two” and “fail[ed] to provide any technical details for the tangible components, but instead predominately describe[d] the system and methods in purely functional terms”). Likewise, the use of generic computer technology, however “specific” to a particular environment, will not rescue a claim from ineligibility if the functionality described constitutes an abstract idea.

Resps. Br. at 262-64.

Under step two of the *Alice* framework, Comcast argues:

... the asserted claims are directed to nothing more than the idea of receiving different types of scheduled events and generating an aggregated list of those events for display, and the claims do not recite any additional limitations that were not well known to a POSITA. RX-0006C (Rinard WS) Q/A 8, 16. Indeed, the asserted claims do not require any specific hardware or equipment for practicing the claims, but simply and generically recite a “processor,” “first and second interactive electronic program guides,” “user television equipment devices,” and “a memory.”

...

Furthermore, simply reciting a “processor,” “user television equipment devices” and “memory”—all of which were well known in the art and are simply generic components used to carry out the claimed abstract idea (RX-0006C at Q/A 16)—does not add “significantly more” to the abstract idea of receiving different types of scheduled events and generating an aggregated list and does not transform the claims of the '871 Patent into a patentable-eligible invention. ...

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Resps. Br. at 265. Comcast cites *Netflix v. Rovi*, 114 F. Supp. 3d 927, as an example of “claims in another Rovi patent” that were found patent-ineligible. *Id.* at 266.

For *Alice*’s first step, Rovi argues that claim 12 is not directed to an abstract idea:

... rather than claiming a broad, abstract idea like aggregating recordings, the claims of the ’871 Patent recite a specific combination of technology—hardware and software components including a plurality of user television equipment devices (*e.g.*, set-top boxes) and at least two different interactive electronic program guides, along with precise, step-by-step functions that the hardware and software components must perform. Rinard Tr. 787-89. Together, the claimed system provides the capability of selecting programs of different types for recording from at least two different interactive electronic program guides, aggregates the collective recording events requests from the at least two different interactive electronic program guides, and provides for the display of those aggregated events on each of the different interactive electronic program guides. *Id.* at 3:5-8:17; Rinard Tr. 787-789, 793.

Rovi Br. at 255. Rovi then argues that Comcast has ignored claim the “detailed” requirements of claim 12, that the claims are directed toward “specific improvements to the prior art systems,” and that “inventions claimed in the ’871 Patent enhance data communications and interoperability within a multi-IPG system[.]” *Id.* at 255-56. Rovi then analogizes the claims to the claims in *Enfish* and *McRO*, which the Federal Circuit found patent-eligible. *Id.* at 256 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336-37 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)).

For *Alice*’s second step, Rovi argues:

Each of the asserted claims of the ’871 Patent, taken as an ordered combination of elements, represents a patent-eligible “application” of a specific solution – not a claim to an idea itself. *See Alice*, 134 S. Ct. at 2355. The ’871 Patent teaches a particular way of improving the conventional operation of IPGs by describing a system that allows users to separately schedule unique recordings through multiple IPGs and user television equipment (*e.g.*, set-top boxes) and aggregate a list of scheduled recordings that can be

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displayed on any of their devices. Thus, the elements of each asserted claim, in combination, represent a significant inventive concept. . . . Respondents have identified no prior system or art that contained each component and function of [claim 12's] ordered combination. . . .

Rovi Br. at 257. Rovi also argues that claim 12 does not preempt “other program guides” and faults Comcast for not arguing preemption. *Id.* at 258, 260. Rovi then analogizes the contested claims to claims the Federal Circuit found eligible in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014), *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016), and *AmDocs (Israel) Limited v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016). *Id.* at 258-59.

In reply, Comcast argues, *inter alia*, that the claims recite generic hardware and that the claims cover activities that humans perform without computers. Resps. Reply at 90-91. Comcast again relies upon *Netflix* and argues that Rovi improperly “seeks to patent the idea of aggregating different types of events from multiple guides, limited only by the use of a ‘processor’ and ‘memory,’ both of which are generic computer components of the type rejected in *Alice*.” *Id.* at 92.

Rovi replies that the claims have “precise, step-by-step functions” and that “they focus on a specific improvement to such a programming guide system itself.” Rovi Reply at 100. Rovi then faults Comcast for not discussing *AmDocs*, although it does not address *Netflix*. *Id.*

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a) *Alice Step One: Abstract Idea*

In *Netflix v. Rovi*, the Northern District of California found that one of Rovi's patents directed to locating programs of interest to a user, based on categories, was ineligible.<sup>122</sup> In particular, the district court focused on claim 11 of U.S. Patent No. 7,945,929, which follows:

11. A system for locating programs of interest to a user, the system comprising:

a receiver that receives a plurality of program listings, wherein at least one of the program listings is associated with two or more simple categories; and

a processor that generates at least one combination category by:

identifying the two or more simple categories associated with the at least one program listing; and

combining at least a subset of the identified simple categories associated with the at least one program listing into the at least one combination category, wherein the combination category comprises more than one of the identified simple categories.

114 F. Supp. 3d at 938-39.

The administrative law judge finds that the asserted claims are directed toward an abstract idea. Here, in summary, claim 12 pertains to an IPG system that:

- 1) Receives a selection from a first guide;
- 2) Receives a selection from a second guide;
- 3) Generates a list by aggregating the selections;
- 4) Displays the aggregated list; and
- 5) Stores the selections in a memory.

Claim 12 predominately focuses on aggregating a list from two different inputs. The claim achieves this through function-oriented limitations that are executed using generic, conventional

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<sup>122</sup> *Netflix, Inc. v. Rovi Corp.*, 114 F. Supp. 3d 927, 937 (N.D. Cal. 2015), *aff'd*, No. 2015-1917, 2016 WL 6575091 (Fed. Cir. Nov. 7, 2016) (Fed. Cir. R. 36).

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equipment and software.<sup>123</sup> This is an abstract idea, devoid of a concrete or tangible application. *See Netflix v. Rovi*, 114 F. Supp. 3d at 939 (finding that claims directed to “the idea of using composite categories to define shows [are] indeed abstract”); *Broadband iTV, Inc. v. Hawaiian Telcom, Inc.*, 136 F. Supp. 3d 1228, 1237 (D. Haw. 2015) (finding patent directed to using “hierarchical ordering based on metadata to facilitate the display and locating of video content” in an electronic program guide was an abstract idea), *aff’d*, No. 2016-1082, 2016 WL 5361570 (Fed. Cir. 2016); *Tech. Dev. & Licensing, LLC v. Gen. Instrument Corp.*, No. 07-cv-4512, 2016 WL 7104253, at \*4-5 (N.D. Ill. Dec. 6, 2016) (finding claims directed toward a television control system for accessing favorite channels lists was an abstract idea).

### ***b) Alice Step Two: Inventive Concept***

The administrative law judge has determined that Comcast has not met its burden of demonstrating that the ‘871 Patent’s claims are directed toward ineligible subject matter.<sup>124</sup>

Rovi compares the ‘871 Patent’s claims to *Enfish*, “where the court deemed claims that focused on a specific improvement to computer functionality patent-eligible, the asserted claims here focus on a specific improvement—the aggregation of event settings (received from at least two different IPGs) in a local or remote database so that a user can view all events set from any of the IPGs in the system. This is in contrast to ‘economic or other tasks for which a computer is

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<sup>123</sup> Like claim 12, dependent claims 13, 17, and 18 are directed toward abstract ideas. Claim 13 pertains to a guide “configured to” select a program for recording, claim 17 pertains to allowing a user to “cancel the recording” selected in claim 12, and claim 18 relates to a processor “configured to allow the user to obtain additional information” about a selection. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1269 (Fed. Cir. 2016), cert. denied, No. 16-1047, 2017 WL 844050 (U.S. Apr. 17, 2017) (“the claims do no more than describe a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem. The purely functional nature of the claim confirms that it is directed to an abstract idea, not to a concrete embodiment of that idea.”).

<sup>124</sup> The administrative law judge finds Comcast has not met its burden under both the preponderance-of-the-evidence and clear-and-convincing standards.

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used in its ordinary capacity.” Rovi Br. at 257 (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336-37 (Fed. Cir. 2016)). Rovi then argues that “The ’871 Patent teaches a particular way of improving the conventional operation of IPGs by describing a system that allows users to separately schedule unique recordings through multiple IPGs and user television equipment (e.g., set-top boxes) and aggregate a list of scheduled recordings that can be displayed on any of their devices.” *Id.* at 257-58.

Rovi then also draws an analogy between the challenged claims and *Bascom*. See Rovi Br. at 259. In *Bascom*, the Federal Circuit identified that the patent-eligible inventive concept was “the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server.”

*Bascom*, 827 F.3d at 1350. Rovi argues:

Just as the claims to a filtering tool that worked in an unconventional way in *Bascom* were an inventive concept, the solution claimed in the ’871 Patent has no conventional counterpart. The claimed solution of the ’871 Patent improves the conventional operation of IPGs by allowing users to separately and seamlessly schedule unique recordings through multiple IPGs and user television equipment such as set-top boxes and aggregate a list of scheduled recordings from the different IPGs for display on any of the devices. The ’871 Patent here, like the patent in *Bascom*, is “claiming a technology-based solution (not an abstract-idea-based solution implemented with generic technical components in a conventional way) to ... overcome[] existing problems with” prior art systems. See *Bascom*, 827 F.3d at 1351.

Rovi Br. at 259.

Comcast argues that Rovi’s analogy to *Bascom* “is to no avail” because claim 12 is directed toward conventional concepts that seek to patent “the idea of aggregating different types



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of events from multiple guides, limited only by” a processor and memory. *See* Resps. Reply at 91-92.

Here, the particular arrangement of claimed elements involves a system that facilitates input from multiple guides, aggregates that input into a useful form that allows a first user to see a second user’s activity. The invention allows users to avoid duplicative purchases and also provides parents with a tangible system that offers “control over whether they wish their children to watch the potentially objectionable content of some news and sports programs.” *See* JX-0004 at 9:56-59, 9:1-17; Rovi Reply at 99 (“The asserted claims of the ’871 Patent enhance data communications and interoperability within an IPG system by enabling set-top boxes to share information from multiple IPGs within the same household so that one IPG can display data added or modified by another IPG in the system.”). This is more than just aggregating recordings, as Comcast argues. Further, the physical limitations in claim 12 are meaningful, as the administrative law judge found that the accused X1 products did not infringe at least because Rovi had not shown that the X1 set-top boxes include guides that satisfy limitation 12d. *See generally* Section IV(D)(4)(a)(4)(c).

Accordingly, the administrative law judge has determined that Comcast has not met its burden of demonstrating that the ’817 Patent lacks an inventive concept.

### **8. Validity**

#### ***a) Anticipation***

At the outset, Comcast explains:

The prior art in this case presents two kinds of invalidating reads. The first kind has the first and second guides executing on different devices, with the devices communicating via a home network. References that disclose guides executing on different devices and communicating via a home network include Akamatsu, which is RX-0223; Humpleman, which is RX-0224;

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and the Ellis applications, which include RX-0057, RX-0074, RX-0075, and RX-0076. The second kind has the first and second guides executing on the same device, with the guides sharing the memory on the device. References that disclose a first and second guide executing on the same device include Humpleman (RX-0224), Alexander, which is RX-0225, and Browne, which is RX-0226.

Resps. Br. at 267 n.38; *see also* RX-0006C (Rinard WS) at Q/A 51.

(1) *Akamatsu (RX-0223)*

Comcast argues that Japanese patent application to Akamatsu et al. (RX-0223) (Japanese Patent App. No. H11-177919) (“Akamatsu”) anticipates the ‘871 Patent’s asserted claims. *See* Resps. Br. at 267-68. Akamatsu’s U.S. counterpart, which would issue as U.S. Patent No. 7,224,886, is cited on page 4 of the ‘871 Patent. *See* JX-0004 at 4; RX-0223 at 1 (field (21) lists Application No. H09-336796); U.S. Patent No. 7,224,886 at 1 (field (30) shows a foreign priority claim to JP 09-336796).

Comcast presents a “two-device read” for Akamatsu. *See* Resps. Br. at 267 & n.38; *see also* RX-0006C (Rinard WS) at Q/A 51. Comcast’s entire argument is:

Akamatsu presents a system with two satellite television receivers, a video recording device, and a television monitor (among other devices). RX-0223 (Akamatsu). As Dr. Rinard explained in his testimony, the disclosure of Akamatsu anticipates *[sic]* the asserted claims under Rovi’s construction, in which there is no “single device” restriction. RX-0006C at Q/A 53-58. Each guide runs on a different receiver, and Figure 8 discloses a “Recording Device Reservation Overview,” which is a list of events generated by aggregating the received scheduled events. RX-0223 at Fig. 8; RDX-0540. The list is accessible for display from both guides. Moreover, the events are stored in a memory in the video recording device. Akamatsu discloses that this memory can be read and written by the satellite television receivers.

Dr. Delp’s assertion that Akamatsu discloses only the user interface to separate interactive electronic program guides is incorrect. CX-1903C (Delp RWS) at Q/A 228. Dr. Delp himself repeatedly asserts that infringement is apparent from the use and

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operation (*i.e.*, the user interface) of the X1 system. Tr. 1027:3-14; 1029:15-24; 1040:15-22. Dr. Delp cannot consistently claim to find infringement based only observing the user interface while also taking the position that Akamatsu does not anticipate because, in his view, it only discloses a user interface.

*Id.* at 267-68; *see also* RX-0006C (Rinard WS) at Q/A 53-58, 68, 75, 83, 90, 97, 104, 110, 116, 122, and 128 (Dr. Rinard discusses Akamatsu in at least these portions of his witness statement).

Rovi argues that “Akamatsu is not prior art because it was ‘laid open’ on July 2, 1999, almost one year after the inventions claimed in the ‘871 Patent were conceived.” Rovi Br. at 240 (citing CX-1903C (Delp RWS) at Q/A 226; RX-0223 at 1). Rovi also argues that Akamatsu also does not disclose a system with two guides.

Based upon the arguments and evidence presented in the briefs, the administrative law judge has determined that Akamatsu is prior art to the ‘871 Patent. Comcast has put forth a *prima facie* case of invalidity, but Rovi has not identified sufficient rebuttal evidence to prove entitlement to an earlier invention date. *See Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1322 (Fed. Cir. 2013) (“After an accused infringer has put forth a *prima facie* case of invalidity, the burden of production shifts to the patent owner to produce sufficient rebuttal evidence to prove entitlement to an earlier invention date.”). The testimony that Rovi relies upon is conclusory. *See, e.g.*, CX-0004C (Delp WS) at Q/A 30 (“Based on information in the file history, I believe StarSight had a working system to demonstrate each of the features by the July 15, 2005 filing date of the application for the ‘871 Patent, and the provisional applications show that StarSight was diligent to the filing date.”). Dr. Delp also confirmed that CX-1343 (StarSight Interactive Program Guide Product Definition), which is U.S. Provisional Application No. 60/094,564, did not disclose recording programs or autotunes as events. *See* Tr. 1209-1213; CX-

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0004C (Delp WS) at Q/A 29 (discussing CX-1343, CX-0871, and the '871 Patent's priority date).

Nevertheless, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Akamatsu teaches a second interactive program guide (limitations 12a, 12c, 12d, and 12e). In Q/A 227, Dr. Delp opined as follows:

**Q227. Dr. Rinard contends that Akamatsu anticipates the '871 Patent. What is your opinion of his argument?**

A227. I disagree with Dr. Rinard. As I said above, Akamatsu is not prior art. It also does not disclose each of the '871 claim limitations. Dr. Rinard asserts that Akamatsu discloses "the two guides run on satellite broadcast receivers 100a and 100b." RX-006C (Rinard Witness Statement) at A53. Dr. Rinard is incorrect. To the extent that Akamatsu discloses a first interactive electronic programming guide, it never discloses a second interactive electronic programming guide.

Dr. Rinard repeatedly cites to Figure 6 and accompanying text of Akamatsu to show the multiple interactive electronic programming guides claimed in the '871 Patent. However, Figure 6, and the corresponding disclosure in paragraph, 34 teach that "a program guide is displayed." This singular program guide is only displayed on one screen (e.g., a liquid crystal display or monitor). Akamatsu ¶ 42, 117. As shown in Figure 1 of Akamatsu (which Dr. Rinard relies upon), there is only one monitor connected to Akamatsu's system.

An AV system in which various AV device such as satellite broadcast receivers 100a, 100b, and *a monitor 120* are connected by a control bus 10, and timer reservation portions 104, 114, including reservation data management portions 105, 115, are disposed within each AV device.

RX-0223 (Akamatsu) at p.2. Indeed, "guide" and "monitor" are always referred to in the singular in Akamatsu. Thus, to the extent "a program guide" disclosed by Akamatsu is at least a "first interactive electronic program guide" (it's not clear that is), there is no disclosure of a "second interactive electronic program guide."

CX-1903C (Delp RWS) at Q/A 227 (emphasis in original).

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While Akamatsu teaches a second satellite broadcast receiver (100b), the reference is too vague and equivocal with regard to where the second interactive program guide resides, what the second guide does, and how it interacts with the first guide to satisfy the clear-and-convincing standard. *See Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1360 n.5 (Fed. Cir. 2007) (Clear and convincing evidence provides “the ultimate factfinder [with] an abiding conviction that the truth of its factual contentions are highly probable.”) (quoting *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984)); *ActiveVideo Networks*, 694 F.3d at 1327 (Fed. Cir. 2012) (same); *see also* CX-1903C (Delp RWS) at Q/A 227.

### (2) *Alexander (RX-0225)*

Comcast argues that published International patent application to Alexander et al. (RX-0225) (Int’l Pub. No. WO 1999/04561) (“Alexander”) anticipates the ‘871 Patent’s asserted claims. *See* Resps. Br. at 268. Alexander is cited on page 5 of the ‘871 Patent. *See* JX-0004 at 5.

Comcast presents a “one-device read” for Alexander. *See* Resps. Br. at 267 & n.38; RX-0006C (Rinard WS) at Q/A 51. Comcast’s entire argument is:

In the RX-0225 (Alexander) references [*sic*], theres [*sic*] is a single devices [*sic*], with the first guide as a parent guide and a second guide as a child guide. Both guides can display a Watch/Record list that includes the first and second events of different types. As Dr. Rinard explained in his testimony, Alexander invalidates the asserted claims of the ‘871 Patent under both parties’ proposed claim constructions since it is in a single device. RX-0006C at Q/A 59-61.

Resps. Br. at 268; *see also* RX-0006C (Rinard WS) at Q/A 59-61, 69, 76, 84, 89, 91, 98, 103, 113, 123, and 129 (Dr. Rinard discusses Alexander in at least these portions of his witness statement).

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The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Alexander teaches guides that are located in the household (limitations 12d / elements i and vii).<sup>125</sup> See RX-0849C (Rinard RWS) at Q/A 34 (“Claim 12 confirms that the IPG application must be executed and embodied in the household instead of on remote hardware located at a headend: “the first and second interactive electronic program guides *in the household*.” (emphasis added by witness)).

Further, with respect to the “shared memories” element (limitation 12e / element ix), Comcast has collected quotations from Alexander and Yuen without explaining how those portions teach a memory accessible to two guides. These deficiencies prevent Comcast from satisfying its clear and convincing burden. See *Pfizer*, 480 F.3d at 1360 n.5 (Fed. Cir. 2007) (Clear and convincing evidence provides ““the ultimate factfinder [with] an abiding conviction that the truth of its factual contentions are highly probable.””).

### (3) Browne (RX-0226)

Comcast argues that published International patent application to Browne and Yurt (RX-0226) (Int’l Pub. No. WO 1992/22983) (“Browne”) anticipates the ‘871 Patent’s asserted claims. See Resps. Br. at 268. Browne is cited on page 5 of the ‘871 Patent. See JX-0004 at 5.

Comcast presents a “one-device read” for Browne. See Resps. Br. at 267 & n.38; see also RX-0006C (Rinard WS) at Q/A 51. Comcast’s entire argument is:

Browne discloses first and second guides executing on a multi-user recorder player device. RX-0226. As Dr. Rinard explained in his testimony, Browne invalidates the asserted claims of the ‘871 Patent. RX-0006C at Q/A 62.

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<sup>125</sup> The administrative law judge previously construed “located in a household” to mean “kept and used at home.” See Section VI(D)(2)(b)(5).

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Resps. Br. at 268; *see also* RX-0006C (Rinard WS) at Q/A 62, 70, 77, 85, 89, 92, 99, 103, 105, 117, and 124 (Dr. Rinard discusses Browne in at least these portions of his witness statement).

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that Browne teaches guides that are located in the household (limitations 12d / elements i, ii, and vii).<sup>126</sup> *See* RX-0849C (Rinard RWS) at Q/A 34 (“Claim 12 confirms that the IPG application must be executed and embodied in the household instead of on remote hardware located at a headend: “the first and second interactive electronic program guides *in the household*.” (emphasis added by witness)).

Dr. Rinard’s testimony RX-0006C (Rinard WS) at Q/A 77, for “interactive electronic program guides,” element ii, follows:

**Q77. What does Browne disclose with regard to this element?**

A77. RX-0226 (Browne) Figure 6, shown in RDX-0528 presents an example screen from an interactive electronic program guide.

This is a reproduction of Figure 6:

**FIG. 6**

600

FREE PROGRAM MEMORY										4.75 HRS
#	LOCKED	TITLE	SOURCE	CHANNEL	TIME	DATE	LENGTH	NOTES	VIEWED	
1	<input type="checkbox"/>	-- NOT YET --	VHF	4	4:00 - 4:30	MAY 17, 1991	0.5	NOT YET RECORDED	<input type="checkbox"/>	
2	<input type="checkbox"/>	--	FM	99.5	1:12 - 1:20	MAY 15, 1991	0.12		<input checked="" type="checkbox"/>	
3	<input type="checkbox"/>	NIGHTLY NEWS	VHF #	4	6:00 - 8:00	MAY 13, 1991	2.0		<input type="checkbox"/>	
4	<input checked="" type="checkbox"/>	BATMAN	CABLE	29	8:00 - 10:00	DEC 28, 1990	2.0	KEEP FOR WENDY	<input type="checkbox"/>	
5	<input type="checkbox"/>	THE ASTRONOMERS	VHF	13	6:30 - 7:30	MAY 13, 1991	1.0		<input type="checkbox"/>	

<sup>126</sup> The administrative law judge construed the term “interactive electronic program guide” to mean “guide that allows navigation through television program listings and causes display of program information on user television equipment.”

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Browne describes this as a “stored program list” selected from the main menu control screen.

See RX-0226 at 7, 26 (pages 5 and 24 of the specification) (“The stored program list screen 600 shown in Fig. 6, may preferably include list of all stored programs.”). Browne also describes a “user control program” that differs from the stored program list shown in Figure 6:

Controller 105 is a microprocessor which preferably runs a user control program and allows a user to access and control the multi-source recorder player 100. The user control section, which is described in greater detail with respect to Figs. 2-11, preferably acts similarly to the graphical interface provided by the Windows product sold by Microsoft Inc. Selections are made via remote control with cursor positioning device such as mouse or trackball.

RX-0226 at 15 (page 13 of the specification); *see also id.* at 16 (page 14 of the specification, which discusses using “an Apple Macintosh computer with multiple screens”). Comcast has not clearly and convincingly shown that Browne teaches an interactive program guide that “allows navigation through television program listings and causes display of program information on user television equipment,” because there is no discussion of how the system allows a user to navigate through television program listings. Further, Comcast has not shown that Browne teaches limitation 12d, because there has not been a sufficient showing that the guides are kept and used in the household. See RX-0006C (Rinard WS) at Q/A 109-10 (Browne is not identified as meeting the “in the household” limitation).

### ***b) Obviousness***

Comcast has relied upon the following references in its obviousness arguments:

- 1) **Akamatsu (RX-0223):** Japanese Patent App. No. H11-177919
- 2) **Browne (RX-0226):** Int’l Pub. No. WO 1992/22983
- 3) **Alexander (RX-0225):** Int’l Pub. No. WO 1999/0456
- 4) **Humpleman (RX-0224):** U.S. Patent No. 6,288,716



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- 5) **Ellis Reference #1 (RX-0057):** U.S. Pat. Pub. No. 2005/0251827 (Ellis '827 application)
- 6) **Ellis Reference #2 (RX-0074):** U.S. Prov. App. No. 60/093,292 (Ellis '292 "UV-73" provisional application)
- 7) **Ellis Reference #3 (RX-0075):** U.S. Prov. App. No. 60/097,527 (Ellis '527 "UV-99" provisional application)
- 8) **Ellis Reference #4 (RX-0076):** U.S. Pat. Pub. No. 2005/0028208 (Ellis '208 application).
- 9) **LaJoie (RX-0222):** U.S. Patent No. 6,772,433
- 10) **Knudson / Knudson '968<sup>127</sup> (RX-0066):** U.S. Pat. Pub. No. 2005/0240968
- 11) **Prevue (RX-0072C):** Prevue Interactive Reference Guide - DCT 1000, V1.2
- 12) **Usui (RX-0236):** U.S. Patent No. 5,808,694
- 13) **Ho (RX-0221):** U.S. Patent No. 6,622,307
- 14) **Byrne (RX-0227):** U.S. Patent No. 5,990,883
- 15) **Hatakeyama (RX-0369):** A. Hatakeyama Home Information Server
- 16) **Knudson '888 (RX-0832):** "Provisional Application for Patent No. UV-56 Prov."
- 17) **Yuen (RX-0204):** Int'l Pub. No. WO 96/07270
- 18) **A "standard operating systems textbook" (RX-0229):** "The Design of the UNIX Operating System (1st Edition) by Maurice Bach"
- 19) **A "standard operating systems textbook" (RX-0235):** "Operating Systems Design and Implementation (2nd Edition) by Tanenbaum and Woodhull"
- 20) **A "standard operating systems textbook" (RX-0228):** "Distributed Operating Systems Concepts and Design"

*See generally* Resps. Br., Section X(E)(3); RX-0006C (Rinard WS), Section VI(2).<sup>128</sup>

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<sup>127</sup> Comcast's nomenclature varies.

<sup>128</sup> Comcast has also filed two petitions for *inter partes* review of the '871 Patent that rely upon overlapping references.

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When examining Dr. Rinard, Comcast's counsel divided claim 12 into the following elements:

- i. A system for displaying interactive electronic program guides, the system comprising a plurality of user television devices located in the household;
- ii. Interactive electronic program guides;
- iii. First and second interactive electronic program guides;
- iv. Receiving a first event of a first type and a second event of a second type;
- v. Generating a list of scheduled events by aggregating received scheduled events;
- vi. Lists of received scheduled events accessible for display;
- vii. Home networks;
- viii. Shared memories; and
- ix. Memories for storing received first and second events.

*See generally* RX-0006C (Rinard WS) at i-ii (table of contents), Q/A 66-130.

For reference, the following table compares Comcast and Rovi's breakdown of the element subdivisions for claim 12:

<b>Comcast's Subdivisions</b>	<b>Rovi's Subdivisions</b>
i.	12pre and 12a
ii.	12pre and 12a
iii.	12a (and 12b-e)
iv.	12b and 12c
v.	12d
vi.	12d
vii.	12d
viii.	12e

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Comcast's Subdivisions	Rovi's Subdivisions
ix.	12e

- (1) *Alexander (RX-0225), in combination with Humpleman (RX-0224), the Ellis references (RX-0057, RX-0074, RX-0075, and/or RX-0076), or Akamatsu (RX-0223) (and Sinha (RX-0228) and Ho (RX-0221))*

Comcast's entire obviousness argument for this combination of references is:

Alexander anticipates the asserted claims, as described above. Dr. Rinard testified that Alexander could also be combined with other references to render obvious the asserted claims. RX-0006C at Q/A 135-145. These combinations used Alexander in combination with other references and multiple devices in a house - invalidating the asserted claims of the '871 Patent under Rovi's proposed claim constructions and apparent interpretation of the asserted claims. *Id.*

Resps. Br. at 286.

Dr. Rinard opined that "Alexander is combined with the knowledge of a person of skill in the art" and then refers to Ellis and Ho. RX-0006 (Rinard WS) at Q/A 135. Dr. Rinard does not identify which claim limitations are taught by Ellis or Ho, why one of ordinary skill in the art would assemble these references—Alexander, the Ellis references, or Ho—to solve the problems identified in the art, or why one of ordinary skill in the art would modify Alexander, the primary reference. *See Plantronics*, 724 F.3d at 1354 ("Where, as here, the necessary reasoning is absent, we cannot simply assume that 'an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.'"); *see generally* RX-0006C (Rinard WS) at Q/A 8-16, 65 (discussing the state of the art).<sup>129</sup> Although Dr. Rinard opined that a person of ordinary skill in the art would be motivated to combine the references in "all of the

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<sup>129</sup> *See* n.92, *supra*.

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combinations” he presented “to obtain a system that better satisfies user needs,” RX-0006C (Rinard WS) at Q/A 217, this testimony is deficient because it does not provide a rational basis for combining a particular combination of references. *See ActiveVideo Networks*.<sup>130</sup> The remainder of Dr. Rinard’s testimony about additional Alexander combinations, RX-0006C (Rinard WS) at Q/A 136 (discussing a combination involving “Humbleman, Ellis, or Akamatsu,” an alternative combination involving no references, and another alternative combination involving one of the systems textbooks, RX-0228 (Sinha)), suffers the same deficiencies. *See id.*; *see also* CX-1903C (Delp RWS) at Q/A 248-49.

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

- (2) *Akamatsu (RX-0223), in combination with LaJoie (RX-0222), Alexander (RX-0225), Browne (RX-0226), Knudson (RX-0066), or Prevue (RX-0072C) and/or the Knowledge of a Person of Skill in the Art*

Comcast’s entire obviousness argument for this combination of references is:

As described above, Akamatsu anticipates the asserted claims of the ‘871 Patent. Akamatsu could also be combined as a system reference disclosing multiple guides with guide functionality references that disclose the remaining required guide features. As disclosed in Akamatsu, a first guide executes on a first satellite

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<sup>130</sup> In *ActiveVideo Networks*, the Federal Circuit affirmed the grant of a JMOL that reversed jury’s finding of obviousness after finding that the expert’s “testimony is generic and bears no relation to any specific combination of prior art elements. It also fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does*.” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (emphasis in original). The insufficient expert testimony was: “The motivation to combine would be because you wanted to build something better. You wanted a system that was more efficient, cheaper, or you wanted a system that had more features, makes it more attractive to your customers, because by combining these two things you could do something new that hadn’t been able to do before.” *Id.* at 1328.

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receiver and a second guide executes on a second satellite receiver. LaJoie, Alexander, Browne, Knudson, or Prevue and/or knowledge of a person of skill in the art disclose remaining guide elements. RX-0006 at Q/A 146-150.

Resps. Br. at 286.

Dr. Rinard opined, as follows:

**Q146. I would like to direct your attention to RX-0223, which is the Akamatsu reference. What references would a person of ordinary skill combine with the Akamatsu reference?**

A146. My combination reads combine Akamatsu as a system architecture reference disclosing multiple guides with a guide functionality reference or references that disclose the remaining required guide features. I discussed the details of those elements[.] As disclosed in Akamatsu, a first guide executes on a first satellite receiver and a second guide executes on a second satellite receiver. LaJoie, Alexander, Browne, Knudson, or Prevue and/or knowledge of a person of skill in the art disclose the remaining guide elements. The received first and second events are stored in the memory of the recording device as disclosed in Akamatsu. This memory is accessible to both guides via the home network as disclosed in Akamatsu. The combinations invalidate the asserted claims of the '871 Patent under Rovi's proposed claim constructions.

Specifically, Akamatsu discloses a system with satellite receivers 100a and 100b, a monitor, and a recording device 110 among other devices. The satellite receivers "have the same constitution" and both run interactive electronic program guides. The first guide runs on receiver 100a and the second guide runs on receiver 100b. Akamatsu discloses how the user can use the first guide executing on receiver 100a to schedule a first event of a first type (for example, a record event) and a second guide executing on receiver 100b to schedule a second event of a second type (for example, a playback event). Akamatsu also discloses a list that includes the events, with the list accessible for display from either guide as the claims require, as I testified about earlier.

RX-0006C (Rinard WS) at Q/A 146.

Dr. Delp opined that:

. . . with respect to LaJoie, Alexander, Browne, Knudson or Prevue, Dr. Rinard has failed to identify with specificity (1) any

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basis for combining these references with Akamatsu; (2) any disclosure within any of these references reflecting that it would have been combined with or incorporated into the system of Akamatsu; and (3) how any such feature or disclosure from these references would have been combined with or incorporated into the system of Akamatsu.”

CX-1903C (Delp RWS) at Q/A 254.

Dr. Rinard does not explain how or why one of ordinary skill in the art would assemble these references—Akamatsu, LaJoie, Alexander, Browne, Knudson, or Prevue and/or the knowledge of a person of skill in the art—to solve the problems identified in the art, or why one of ordinary skill in the art would modify Akamatsu, the primary reference. *See Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>131</sup> The remainder of Dr. Rinard’s testimony about the Akamatsu combinations just rehashes the anticipation argument. RX-0006C (Rinard WS) at Q/A 147-50 (Akamatsu is the only reference discussed).

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

(3) *Browne (RX-0226), in combination with LaJoie (RX-0222), Alexander (RX-0225), Knudson (RX-0066), or Prevue (RX-0072C) references and/or the Knowledge of a Person of Skill in the Art (and Knudson ‘888 (RX-0832))*

Comcast’s entire obviousness argument for this combination of references is:

As noted above, Browne anticipates the asserted claims of the 871 Patent. It can also be combined as a system architecture reference disclosing multiple guides with a guide functionality reference or

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<sup>131</sup> See n.92, *supra*.

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references that disclose the remaining required guide features. Dr. Rinard described the details of how this would have been accomplished. RX-0006 at Q/A 151-162.

Resps. Br. at 287.

Dr. Rinard's testimony about Browne as a primary reference essentially substitutes "Browne" for Akamatsu. *Compare* RX-0006 (Rinard WS) at Q/A 146 *with id.* at Q/A 151. Although Dr. Rinard opines about "remaining guide elements" that are missing from Browne, he does not identify which claim limitations are taught by the four references "and/or" the knowledge of a person of skill in the art. *See id.* at Q/A 151. Further, Dr. Rinard does not explain how or why one of ordinary skill in the art would assemble these references—Browne, LaJoie, Alexander, Knudson, or Prevue and/or the knowledge of a person of skill in the art—to solve the problems identified in the art, or why one of ordinary skill in the art would modify Browne, the primary reference. *See Plantronics*, 724 F.3d at 1354 ("Where, as here, the necessary reasoning is absent, we cannot simply assume that 'an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.'").<sup>132</sup> The remainder of Dr. Rinard's testimony about the Browne combinations mostly rehashes the anticipation argument, with an unexplained reliance on Knudson '888 (RX-0832). *See* RX-0006C (Rinard WS) at Q/A 153-62 (Dr. Rinard never introduces Knudson '888 or explains why he is relying on it).

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

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<sup>132</sup> *See* n.92, *supra*.

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- (4) *Humpleman (RX-0224), in combination with either Knudson (RX-0066), LaJoie (RX-0222), Alexander (RX-0225), Prevue (RX-0072C), or Browne (RX-0226)*

Comcast's entire obviousness argument for this combination of references is:

The relevant combinations combine Humpleman as a system architecture reference with a guide functionality reference or references disclosing the remaining guide elements. As Dr. Rinard testified, there are two ways these references could be combined: a "two HTML guides" read, and a "one HTML, one native guide" read. RX-0006 at Q/A 163-173.

Resps. Br. at 287.<sup>133</sup>

Dr. Rinard opined that:

... Combining Humpleman with any of the interactive electronic program guides disclosed in Knudson, LaJoie, Alexander, Browne, and/or knowledge of a person of ordinary skill in the art in any one of the following ways, results in an obvious system that meets every limitation of the asserted claims under Rovi's proposed construction.

RX-0006C (Rinard WS) at Q/A 163. Dr. Rinard then presents two "reads," each of which involve combinations with "LaJoie, Alexander, Browne, Knudson, or Prevue." *See id.* at Q/A 164-65. Dr. Rinard does not explain how or why one of ordinary skill in the art would assemble these references—Humpleman, LaJoie, Alexander, Browne, Knudson, or Prevue—to solve the problems identified in the art, or why one of ordinary skill in the art would modify Humpleman, the primary reference. *See Plantronics*, 724 F.3d at 1354 ("Where, as here, the necessary reasoning is absent, we cannot simply assume that 'an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.'").<sup>134</sup>

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<sup>133</sup> Humpleman is cited on page 4 of the '871 Patent. *See* JX-0004 at 4.

<sup>134</sup> *See* n.92, *supra*.



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Further, Dr. Rinard has not clearly identified a memory accessible to the first and second guides in Humpleman (limitation 12e). *See generally* RX-0006C (Rinard WS) at Q/A 111-119 (Humpleman is not among the references discussed as having memory).

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

- (5) *The Ellis references (RX-0057, RX-0074, RX-0075, and/or RX-0076), in combination with LaJoie (RX-0222), Alexander (RX-0225), Browne (RX-0026), Knudson (RX-0066), or Prevue (RX-0072C) and/or the Knowledge of a Person of Skill in the Art*

Comcast's entire obviousness argument for this combination of references is:

RX-0057 (Ellis '827 application), RX-0074 (Ellis '292 "UV-73" provisional application), RX-0075 (Ellis '527 "UV-99" provisional application), and RX-0076 (Ellis '208 application) are the Ellis references. The Ellis non-provisionals benefit from the priority date of the provisional applications because those provisional support the subject matter of the non-provisionals. Notably, throughout the extensive prosecution of the '871 Patent, Rovi failed to show that Ellis was not prior art.

As Dr. Rinard explained in his testimony, in these combinations Ellis is the system architecture reference. Ellis discloses a first device running a first program guide and a second device running a second program guide, communicating over an in-home network. LaJoie, Alexander, Knudson, Browne, or the Prevue guide and/or knowledge of a person of skill in the art are program guide functionality references that disclose the remaining guide elements. RX-0006C at Q/A 174-188. In particular, it would have been obvious to combine references and products like LaJoie and Prevue, for example, which were developed by the same company.

Resps. Br. at 287-88.<sup>135</sup>

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<sup>135</sup> Ellis '827 (RX-0057) and Ellis '208 (RX-0076), which were considered by the Examiner, are cited on page 4 of the '871 Patent. *See* JX-0004 at 4. Ellis '292 (RX-0074) and Ellis '527 (RX-0075) were also before the Examiner. *See* RX-0006C (Rinard WS) at Q/A 20 (explaining that

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Dr. Rinard opines, as follows:

**Q174. Next I would like to direct your attention to RX-0057, RX-0074, RX-0075, and RX-0076, which are the Ellis references. What references would a person of ordinary skill combine with Ellis?**

A174. In these reads Ellis is the system architecture reference. Ellis discloses a first device running a first program guide and a second device running a second program guide. The devices communicate over an in-home network. LaJoie, Alexander, Knudson, or the Prevue guide and/or knowledge of a person of skill in the art are program guide functionality references that disclose the remaining guide elements (first and second events of first and second types, aggregating events into a list accessible for display from both guides, storing the events in a memory accessible to both guides). In particular, it would have been obvious to combine references and products like LaJoie and Prevue, for example, which were developed by the same company.

For example, Knudson discloses a first event of a first type (specifically, a reminder event) and a second event of a second type (specifically, a record event). Alternatively, Knudson also discloses reminder, auto-tune, and recording events for individual programs and for series. Knudson also discloses a single list of events that includes all upcoming and reminder events. This list is generated by aggregating the first and second events. Alternatively, the other guide references (LaJoie, Alexander, Browne, and Prevue) as well as the knowledge of a person of ordinary skill in the art similarly disclose the required claim elements. For example, Figure 14 from LaJoie discloses an "Events Summary," which is a list of events generated by aggregating the received scheduled events. This is visible in RDX-0557. These reads invalidate the asserted independent claims of the '871 Patent under Rovi's proposed claim constructions.

RX-0006C (Rinard WS) at Q/A 174.

Dr. Rinard has not identified which of the four Ellis references is a primary reference for this obviousness combination, why one of ordinary skill in the art would assemble these nine

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the "The examiner took the position that the provisionals that Ellis and Ellis '208 relied on, specifically Ellis application No. 60/093292 ("Ellis '292"), which is RX-0074 and Ellis application No. 60/097527 ("Ellis '527"), which is RX-0075, supported the claim rejections."). *See also* CX-1903C (Delp RWS) at Q/A 275 (providing background on the Ellis references).

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references “and/or” ordinary knowledge—the Ellis references, LaJoie, Alexander, Browne, Knudson, or Prevue and/or the knowledge of a person of skill in the art—to solve the problems identified in the art, or why one of ordinary skill in the art would modify the unspecified primary reference. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”); *see generally* RX-0006C (Rinard WS) at Q/A 8-16, 65 (discussing the state of the art).<sup>136</sup>

Further, Dr. Rinard has not clearly identified where Ellis explains aggregating a list of scheduled events (limitation 12d). *See* CX-1903C (Delp RWS) at Q/A 284. Dr. Rinard opines, as follows:

**Q180. Rovi contends that Ellis ‘292 is silent on aggregating the list of the received scheduled events. What is your opinion of this argument?**

A180. In my analysis of Ellis, this limitation is disclosed in a program guide functionality reference and/or knowledge of a person of skill in the art combined with Ellis.

RX-0006C (Rinard WS) at Q/A 179-80.

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

(6) *LaJoie (RX-0222), in combination with either Alexander (RX-0225), Usui (RX-0236), Byrne (RX-0227), Browne (RX-0226) and/or the Knowledge of a Person of Skill in the Art*

Comcast’s entire obviousness argument for this combination of references is:

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<sup>136</sup> *See* n.92, *supra*.

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LaJoie discloses a comprehensive set of IPG features. As Dr. Rinard explained, it would have been obvious for a POSITA to combine LaJoie with any number of architecture references. RX-0006C at Q/A 189-204.

Resps. Br. at 288.<sup>137</sup>

Dr. Rinard does not identify which claim limitations are taught by LaJoie, why one of ordinary skill in the art would assemble these references—LaJoie, Alexander Usui, Byrne, Browne, and/or the knowledge of a person of skill in the art—to solve the problems identified in the art, or why one of ordinary skill in the art would modify LaJoie, the primary reference. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”); *see generally* RX-0006C (Rinard WS) at Q/A 8-16, 65 (discussing the state of the art); CX-1903C (Delp RWS) at Q/A 287 (“Despite Dr. Rinard’s assertions, he offers no evidence for why a person of ordinary skill in the art, using only LaJoie, would be motivated to combine LaJoie with a system with multiple set-top boxes using a shared memory system.”).<sup>138</sup>

Further, Dr. Rinard has not clearly identified a second guide in LaJoie (limitations 12a and 12c). *See* CX-1903C (Delp RWS) at Q/A 288 (“neither Alexander nor LaJoie disclose multiple interactive program guides”); *see generally* RX-0006C (Rinard WS) at Q/A 82-89 (LaJoie is not among the references discussed as having first and second interactive electronic program guides).

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<sup>137</sup> LaJoie, which was considered by the Examiner, is cited on page 4 of the ‘871 Patent. *See* JX-0004 at 4; CX-1903C (Delp RWS) at Q/A 292.

<sup>138</sup> *See* n.92, *supra*.

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Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

(7) *Hatakeyama (RX-0369), in combination with LaJoie (RX-0222), Alexander (RX-0225), Knudson (RX-0066), or Prevue (RX-0072C) and/or the Knowledge of a Person of Skill in the Art*

Comcast's entire obviousness argument for this combination of references is:

Hatakeyama can be combined with other references as a system architecture reference disclosing multiple guides with a guide functionality reference or references that disclose the remaining required guide features. RX-0006C at Q/A 205.

Resps. Br. at 288. This is the opinion relating to Hatakeyama:

**Q205. Next I would like to direct your attention to RX-0369, which is the Hatakeyama reference. What references would a person of ordinary skill combine with Hatakeyama?**

A205. My reads combine Hatakeyama as a system architecture reference disclosing multiple guides with a guide functionality reference or references that disclose the remaining required guide features. As disclosed in Hatakeyama, the first guide executes on a first home personal computer and the second guide executes on a second home personal

RX-0006C (Rinard WS) at Q/A 205.

Comcast's counsel did not directly ask Dr. Rinard what Hatakeyama teaches or how Hatakeyama in combination with four references "and/or" the knowledge of a person of ordinary skill teaches each and every limitation of claim 12. For instance, Dr. Rinard has not explained how Hatakeyama, or Hatakeyama in combination with these references, teaches a memory accessible to the first and second interactive electronic program guides or a system that receives a second event of a second type (sent from a second IPG). See RX-0006C (Rinard WS) at Q/A 209-10. Thus, Comcast's argument fails to analyze the scope and content of the prior art or the

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differences between the prior art and claim 12. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966) (“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.”); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007) (in addition to secondary considerations, these “factors continue to define the inquiry that controls.”).

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the asserted claims, as a whole, would have been obvious in view of the above references.

### (8) *Secondary Considerations*

Rovi argues that the ‘871 Patent was a commercial success and that a long-felt need both support its argument that the ‘871 Patent is not obvious. *See* Rovi Br. at 250-54.

Comcast argues that “contemporaneous conception of the claimed subject matter by others in the same field” indicates that the ‘871 Patent is obvious. *Resps. Br.* at 288. Comcast also argues that “evidence and factors cited by Rovi are conclusory, and the same features were successful in the prior art” and that Rovi has failed to meet the nexus requirement. *Id.* at 288-89.

#### (a) *Commercial Success*

The administrative law judge has determined that Rovi has not made a showing that the ‘871 Patent was commercially successful because it has not shown that any products infringe or practice the ‘871 Patent.<sup>139</sup>

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<sup>139</sup> In the alternative, if it is later found that the X1 or domestic industry products discussed above infringe or practice the ‘871 Patent, then the evidence shows that the ‘871 Patent has had some commercial success, as the products have enjoyed financial success and the corresponding guides embodied the claimed features. *See generally* CX-0004C (Delp WS) and CX-1903C (Dr. Delp opines that various guides incorporate the patented features); CX-1905C (Putnam RWS) at

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### (b) *Licensing Success*

The Federal Circuit specifically requires “affirmative evidence of nexus where the evidence of commercial success presented is a license, because it is often cheaper to take licenses than to defend infringement suits.” *In re Cree*, 818 F.3d at 703 (Fed. Cir. 2016) (quotations omitted). The Federal Circuit explained that

When the specific licenses are not in the record, it is difficult for the court to determine if “the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons.”

*Id.* (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1294 (Fed. Cir. 2012)).<sup>140</sup> In general, the existence of a license alone is insufficient to show that the licensed patent was a commercial success. *See Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (“Without a showing of nexus, “the mere existence of ... licenses is insufficient to overcome the

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Q/A 194-17 (testifying about various guides and set-top boxes, their sales, and demand for multi-room DVR). However, Rovi’s showing is weak, because it has not shown that its success is not due to other factors, such as advertising and marketing or “other economic and commercial factors unrelated to the quality of the patented subject matter.” *See In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (rejecting argument where patentee did not explain “that the product was purchased due to the claimed features”); *In re DBC*, 545 F.3d 1373, 1384 (Fed. Cir. 2008). In particular, Rovi has not sufficiently shown that multi-room DVR drove consumer purchasing decisions rather than other factors (such as demand for cable television itself).

<sup>140</sup> In *Antor Media*, 689 F.3d at 1294, the Federal Circuit criticized evidentiary support that is similar to the present investigation:

Antor merely lists the licensees and their respective sales revenue. The licenses themselves are not even part of the record. Antor provides no evidence showing that the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons. The Board was thus correct in holding that the existence of those licenses is, on its own, insufficient to overcome the *prima facie* case of obviousness.

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conclusion of obviousness” when there is a strong *prima facie* case of obviousness.”); *see also Amazon.com*, 2016 WL 1170773 at \*17 (“Mr. Holtzman’s testimony lists patent family licenses and revenue, but does not discuss the merits of the challenged claim as they relate to any particular license for the ‘956 patent in the portfolio of licenses. . . . [this] does not establish whether a specific license (or licensing clause, etc.) for the ‘956 patent occurred because of the merits of the challenged claim, the merits of unchallenged claims, for other patented inventions, or for other economic reasons related to the whole ‘956 patent family.”).

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The evidence does not show, however, that these licenses are based on the merits of the patents as opposed to a business decision to avoid litigation, a prior business relationship, or other economic reason. *See In re Cree*, 818 F.3d at 703; *In re Antor Media*, 689 F.3d at 1294.

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] Accordingly, the administrative law judge has determined that Rovi has not shown that licensing of the ‘871 Patent—apart from the portfolio—has been a success.

### (c) *Long-Felt Need*

Rovi argues:

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<sup>141</sup> It is not readily apparent whether the licenses are in the record or if Dr. Putnam read them. *See generally* CX-1905C (Putnam RWS) at Q/A 75-79.



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The '871 Patent satisfied a long-felt need for coordination across IPGs in a household. CX-1904C (Williams RWS) at Q/A 98-101; CX-1903C (Delp RWS) at Q/A 298-299; CDX-0205C ('871 Reviews). Persons of ordinary skill in the art at the time of the inventions would have considered the networked whole home DVR solutions too complex, costly, and impractical. CX-1904C (Williams RWS) at Q/A 101.

Rovi Br. at 254.

Long-felt need “is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem.” *Texas Instruments Inc. v. U.S. Int’l Trade Comm’n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

Rovi’s evidence consists of conclusory expert testimony. *See, e.g.*, CX-1904C (Williams RWS) at Q/A 98-101; CX-1903C (Delp RWS) at Q/A 298-299. Mr. Williams and Dr. Delp did not identify the date when the long-felt need first began (*i.e.*, Mr. Williams and Dr. Delp did not analyze the need “as of the date of an articulated identified problem and evidence of efforts to solve that problem,” per *Texas Instruments*).<sup>142</sup> *Id.* Further, the exhibit cited, CDX-0205 (reviews for the '871 Patent), discusses the '556 Patent, not the '871 Patent. (The “AnyRoom DVR” mentioned in Q/A 299 is not discussed in CDX-0205.)

Accordingly, the administrative law judge has determined that this testimony is insufficient to find a long-felt need, and that this factor does not support non-obviousness.

### (d) *Contemporaneous Invention by Others*

Comcast argues:

The objective facts showing the obviousness of the Asserted Claims include the contemporaneous conception of the claimed subject matter by others in the same field, including all of the references discussed above. For example, the Akamatsu reference,

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<sup>142</sup> While Mr. Williams discussed the 1992, 1998, and 1999 timeframes, those discussions were not cited by Rovi, and the discussions relate to the priority dates of the patents, not the dates when the alleged need arose.

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regardless of whether it is prior art, shows simultaneous creation of a solution. RX-0223. These independent entities developed and reduced to practice similar subject matter in their products and patent applications that were developed before the filing of Rovi's non-provisional U.S. Patent application.

Resps. Br. at 288.

The administrative law judge has determined that Comcast's contemporaneous inventions argument provides only negligible support for a finding of obviousness. To begin, many of the references Comcast relies upon were disclosed to the Examiner during prosecution. While Akamatsu is close prior art, it does not weigh significantly in the secondary considerations analysis because the reference is too vague and equivocal with regard to where the second interactive program guide resides, what the second guide does, and how it interacts with the first guide to show that it was a simultaneous invention.

### *(e) Weighing the Secondary Consideration Factors*

On the whole, the administrative law judge has determined that Rovi's secondary considerations arguments and the evidence cited therein is of negligible probative value. The evidence cited by Comcast is also negligible and does not have a perceptible impact on the obviousness calculus.

### *c) Indefiniteness*

Comcast argues:

Claim 12 includes the term "A processor configured to: Receive,...; Receive,...; and generate..., wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household." Although it does not contain the word means, it recites "function without reciting sufficient structure for performing that function." *Williamson*, 792 F.3d at 1349. [The] term does not identify a well-known structure that would have been well-understood without resort to the specification, and the specification does not provide sufficient structure. Simple recitation of the function performed by

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the general purpose computer is not an algorithm. *See Triton Tech of Texas, LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378-79 (Fed. Cir. 2014) (holding that accumulating data by a numerical “integrator means,” as a “conventional microprocessor,” was invalid because “merely using the term ‘numerical integration’ does not disclose an algorithm—*i.e.*, a step-by-step procedure—for performing the claimed function.”). So too with the “processor” element of Claim 12. The parts of the specification that discuss this element do not discuss any code or algorithm. *See, e.g.*, JX-0004 (‘871 Patent) at 1:53-65, 7:53-59. Figs. 1A-1C, and 31.

Resps. Br. at 289-90.

The administrative law judge construed the term “processor” and addressed Comcast’s indefiniteness argument in Section VI(D)(2)(b)(7), above. Claim 12 is not indefinite.

### **E. U.S. Patent No. 8,578,413**

#### **1. Overview of the ‘413 Patent (JX-0005)**

The ‘413 Patent, entitled “Interactive television program guide with remote access,” issued on November 5, 2013. The ‘413 Patent is a continuation of the ‘801 Patent. It claims the benefit of U.S. Provisional Application No. 60/097,527, filed August 21, 1998, and U.S. Provisional Application No. 60/093,292, filed July 17, 1998. The ‘413 Patent shares “essentially the same specification” as the ‘263 Patent and the ‘801 Patent. *See* Resps. Br. at 63; *see also* Rovi Br. at 41 (explaining the patents “stem from a common, parent application filed on July 16, 1999”). The ‘413 Patent relates to interactive television guide programs that operate on local devices, such as a set-top box, and remote devices, such as a laptop or mobile phone.

#### **2. Claim Construction**

##### ***a) Level of Ordinary Skill in the Art***

The parties address the level of ordinary skill for the ‘263, ‘801, and ‘413 Patents together. *See* Rovi Br. at 42; Resps. Br. at 70.

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The administrative law judge already determined that a person having ordinary skill in the relevant art would have a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline and two to four years of experience or familiarity with computer networks, graphical user interfaces, and the associated computer software. *See* Section IV(B)(2)(a).

### *b) Disputed Claim Term*

- (1) *Records the television program corresponding to the selected television program listing using the local interactive television program guide equipment*

The parties dispute the meaning of the phrase “records the television program corresponding to the selected television program listing using the local interactive television program guide equipment,” which only appears in the claims 1 and 10 of the ‘413 Patent. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
records using the local interactive television program guide equipment the television program corresponding to the selected television program listing	Comcast does not clearly present a construction in its post-hearing brief.

*See* Rovi Br. at 53; Resps. Br. at 79-81.

Rovi's argument, which is comingled with three other disputed phrases, appears above at Section IV(B)(2)(c)(10). *See* Rovi Br. at 53-54 (Section V(C)(2)(h)). Comcast's argument, which is comingled with five other disputed phrases, appears above at Section IV(B)(2)(c)(10). *See also* Resps. Br. at 79-81 (Section VIII.B.3.c).

The administrative law judge construes the phrase “records the television program corresponding to the selected television program listing using the local interactive television

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program guide equipment” to mean “records using the local interactive television program guide equipment the television program corresponding to the selected television program listing.”

Comcast has not presented a cogent argument, with sufficient intrinsic (Comcast does not cite the ‘413 patent or its prosecution history) or extrinsic support, to warrant construing the phrase otherwise.

The above construction comports with the claim language, neither expands nor narrows the claim language, and is consistent with how one of ordinary skill in the art would read the claims. *See* CX-0002C at Q/A 126, 141.

### 3. Literal Infringement

#### a) *Claims 1, 3, 5, 9, 10, 14, and 18*

Rovi asserts claims 1, 3, 5, 9, 10, 14, and 18 of ‘413 Patent. Rovi Br. at 60. Dependent claims 3, 5, 9, 14, and 18 follow:

- 3. The system defined in claim 1 wherein the remote access interactive television program guide obtains the user profile over the Internet communications path.
- 5. The system defined in claim 1 wherein the remote access interactive television program guide obtains the user profile in response to a user input.
- 9. The system defined in claim 1 wherein the remote access interactive television program guide obtains program guide data based on the user profile.
- 14. The method defined in claim 10 wherein the remote access interactive television program guide obtains the user profile in response to a user input.
- 18. The method defined in claim 10 wherein the remote access interactive television program guide obtains program guide data based on the user profile.

JX-0005 at 40:52-42:34.

Rovi relies upon the same evidence and argument presented for claim 1 of the ‘263 Patent to argue that claims 1, 3, 5, 9, 10, 14, and 18 are infringed. *See generally* Rovi Br.,

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Section V(E)(1). For instance, the conclusion of Rovi's argument for limitation 1c of the '263 Patent is typical for its allegations that the X1 and Legacy products infringe the '413 patent:

The evidence and arguments made with respect to '263 claim element 1b [*sic*, 1c] also show that the following claim elements are met by the X1 system: '263 claim elements 14c, 17b; **'413 claim elements 1b, 1c, 3, 5, 9, 10b, 10c, 10d, 14, 18**; and '801 claim elements 1a, 5a, 10a, 10c, 10d, 15a, 15c. CDX-0306C (CX-0002C (Shamos WS) at Q/A 216) (demonstrating X1 and Legacy Guide infringement); CX-1634, -1638 (X1 Screenshots for the '413 Patent); CX-1636, 1641 (X1 Screenshots for the '801 Patent); CX-0002C (Shamos WS) at Q/A 250, 259, 267, 269, 275, 278, 281, 288, 290, 293, 295, 297, 301, 314, 324, 330, 332, 342, 346.

Rovi Br. at 76 (emphasis added; Rovi's conclusion for the Legacy products, *see* Rovi Br. at 77, correlates the "evidence and arguments made with respect to '263 claim element 1c" with the same limitations and dependent claims listed for the X1 products).

Similarly, Comcast has not presented any separate, substantive non-infringement arguments for the '413 Patent. *See generally* Resps. Br. at Sections VIII(C)(2)(a), VIII(C)(2)(b) (the sub-headings indicate Comcast's arguments are directed toward the '263, '413, and '801 Patents collectively or the '263 and '413 Patents together). In particular, Comcast's arguments do not distinguish between discrete claims or claim limitations. For example, Comcast identifies the three Remote Access patents in sub-headings and does not identify any claim numbers or alphanumeric claim limitations in its subsequent argument. Two exemplary images follow:

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iii. (263/413/801) “Communication” transmitted by the remote app is different from the “communication” received by “local guide”

Comcast’s X1 platform does not infringe any of the asserted claims because X1 does not

[

] The plain language of the claims requires that the communication that is sent by the “remote access interactive television program guide,” “remote guide,” or “mobile device” is the

iv. (263/413/801) Comcast’s X1 program guide software neither records nor schedules recordings of TV programs |

Comcast’s X1 platform does not infringe any asserted claim because it does not have a

[

] “recording” television programs. Every asserted claim requires that it is the local guide that records the program selected using the remote guide. RX-0850C at QA169. Rovi’s

See Resps. Br. at 92-97 (Sections VIII(C)(2)(a)(iii), VIII(C)(2)(a)(iv)) (highlighting added). In reply, Comcast adds:

The entirety of Rovi’s infringement analysis addresses only claim 1 of the ’263 patent. There is no analysis of any dependent claim, nor is there any analysis of any claim of the ’413 or ’801 patents. See Compl. PoHB at 62-84. While Respondents agree that all of the independent claims of the ’263 and ’413 patents are essentially identical and Rovi’s approach is reasonable for those five claims, Respondents do not agree this is proper for the remaining claims.

... ’413 claims 3, 5, 9, 14, and 18 recite limitations related to how the remote guide receives a user profile. See JX-0005 (’413 patent) at 40:52-54, 40:58-60, 41:1-3, 42:22-24, and 42:29-31. There is *no discussion* of these limitations in Rovi’s discussion of ’263 element 1c. See Compl. PoHB at 72-77. Given the complete failure to even discuss these limitations, the Commission should find that Rovi has failed to carry its burden to prove infringement of ’263 claim 2, ’413 claims 3, 4, 9, 14, and 18, and ’801 claims 1, 5, 10, and 15.

Resps. Reply at 27-28 (emphasis in original). The evidence Rovi cites for limitation 1c (for the

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accused X1 and Legacy products) is sufficient to demonstrate infringement for claims 3, 5, 9, 10, 14, and 18, and besides stating that it disagrees, Comcast has not explained (or cited any evidence demonstrating) how the accused products do not infringe. Thus, Comcast has not rebutted Rovi's showing that claims 3, 5, 9, 10, 14, and 18 are infringed.

Accordingly, the administrative law judge finds that Comcast infringes 1, 3, 5, 9, 10, 14, and 18 of '413 Patent for the same reasons it infringes claims 1, 2, 14, and 17 of the '263 Patent.

### *a) Comcast's Additional Non-Infringement Arguments*

Comcast and Rovi both rely upon the same evidence and arguments presented for the '263 Patent to argue that Comcast's alternative designs do or do not infringe claims 1, 5, 10, and 15 of the '413 Patent. The administrative law judge already determined that Comcast cannot avoid infringement simply because there may be alternative ways to use the accused products, *see* Section IV(B)(c)(1), and that determination also applies here.

## **4. Indirect Infringement**

### *a) Induced Infringement of the '413 Patent*

Neither Rovi nor Comcast presents separate argument, apart from the '263 Patent, as to whether Comcast does or does not induce infringement of claims 1, 3, 5, 9, 10, 14, and 18 of '413 Patent. *See generally* Rovi Br., Section V(E)(4); Resps. Br., Section VIII(C)(3).

Accordingly, the administrative law judge finds that Comcast induces infringement of claims 1, 3, 5, 9, 10, 14, and 18 of '413 Patent for the same reasons it induces infringement of claims 1, 2, 14, and 17 of the '263 Patent.

### *b) Contributory Infringement of the '413 Patent*

Neither Rovi nor Comcast, ARRIS, or Technicolor presents separate argument, apart from the '263 Patent, as to whether ARRIS or Technicolor does or does not contribute to the



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infringement of claims 1, 3, 5, 9, 10, 14, and 18 of '413 Patent. *See generally* Rovi Br., Section V(F); Resps. Br., Section VIII(C)(4). Accordingly, the administrative law judge finds that ARRIS and Technicolor do not contributorily infringe claims 1, 3, 5, 9, 10, 14, and 18 of '413 Patent for the same reasons does not contributorily infringe claims 1, 2, 14, and 17 of the '263 Patent.

### 5. Domestic Industry – Technical Prong

Rovi does not clearly identify which claims of the '413 Patent are practiced by the domestic industry products. *See generally* Rovi Br., Section V(G). Rather, Rovi explains:

For purposes of brevity, Rovi refers to the '263 Patent claim elements below and indicate relevant claim elements of the '413 and '801 patents wherever the same evidence is applicable in showing whether the claim element has been met. Relevant claim language as to all claims is provided in full at CDX-0307C (CX-0002C (Shamos WS) at Q/A 383-433).

Rovi Br. at 97. For instance, the conclusion of Rovi's argument for the preamble of claim 1 of the '263 Patent is typical for the Rovi (i-Guide, Passport, and TotalGuide xD) and Verizon FiOS domestic industry products:

The evidence and arguments made with respect to '263 claim element 1pre also show that the following claim elements are met by the Rovi systems: '263 claim elements 14pre, 17pre; **'413 claim elements 1pre, 10pre;** and '801 claim elements 1pre, 1a, 5pre, 5a, [sic] 10pre, 10a, 10c, 15pre, 15a, 15c. CX-0002C (Shamos WS) at Q/A 434-35, 444-45, 452-53, 474-75, 488-89, 490-92, 504-07, 516-19, 522-23, 532-35, 538-39.

Rovi Br. at 98 (emphasis added).

Comcast does not present a separate argument, apart from the '263 Patent, as to whether Rovi does or does not satisfy the technical prong. *See generally* Resps. Br., Section VIII(D) (Comcast even acknowledges the similarities to its non-infringement case: "The asserted claims

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do not read on the asserted DI systems for many of the same reasons that the claims do not read on Comcast's. RX-0850C (Wigdor RWS) at Q/A 231." Resps. Br. at 114).

Accordingly, the administrative law judge finds that the Rovi and Verizon products practice claims 1, 3, 5, 9, 10, 14, and 18 of '413 Patent for the same reasons those products practice claims 1, 2, 14, and 17 of the '263 Patent.

### **6. Patent Eligibility and Validity**

Comcast does not present any separate arguments, *i.e.*, arguments apart from the '263 Patent, that contend the '413 Patent's asserted claims are ineligible or invalid. *See generally* Resps. Br., Section VIII(E).

The administrative law judge already determined that claims 1, 2, 14, and 17 of the '263 Patent are not ineligible and not invalid. *See* Section IV(B)(7).

Accordingly, the administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that claims 1, 3, 5, 9, 10, 14, and 18 of '413 Patent are ineligible or invalid.

### **F. U.S. Patent No. 8,621,512**

#### **1. Overview of the '512 Patent (JX-0006)**

The '512 Patent, entitled "Interactive television program guide with simultaneous watch and record capabilities," issued on December 31, 2013. The application that would issue as the '512 Patent, Application No. 13/280,215, was filed on October 4, 2011. The '512 Patent claims the benefit of several applications, the earliest of which is Provisional Patent Application No. 60/089,487, which was filed on June 16, 1998. The '512 Patent discloses a television guide that allow users to record a program while simultaneously watching another program.

Comcast has introduced the '556 Patent as addressing "multi-tuner conflict resolution."

See Tr. 37.

**2. Claim Construction**

***a) Level of Ordinary Skill in the Art***

Rovi argues:

A person of ordinary skill in the art relevant to the '512 Patent would have a bachelor's degree in electrical or computer engineering or computer science, or equivalent experience, and two to four years of experience relating to computer programming and user interfaces. CX-0003C (Balakrishnan WS) at Q/A 185; CX-1920C (Balakrishnan RWS) at Q/A 19-22.

Rovi Br. at 134-35.

Comcast argues:

A POSITA of the '512 patent as of Rovi's proposed date of invention would have a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline, and at least two to three years of experience or familiarity with electronic program guides, television video signal processing, graphical user interfaces, and associated computer software, or the equivalent experience gained through work in industry or research. See RX-0004C (Bederson WS) at Q/A 48.

Resps. Br. at 170.

***b) Disputed Claim Terms***

***(1) Preambles***

The preamble of claim 1 is "A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising[.]" JX-0006 at 18:35-37. The preamble of claim 13 is "A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising[.]" *Id.* at 19:41-43.

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The parties disagree on whether the preambles are limiting. This is Rovi's entire opening argument:

The preambles of claims 1 and 13 are not limiting. CX-0003C (Balakrishnan WS) at Q/A 191; *see also*, *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997).

Rovi Br. at 135. Dr. Balakrishnan opined:

**Q191. Do you have any opinions regarding the preamble of claims 1 and 13?**

A191. Yes, I do. In my opinion, when reading the preamble of claims 1 and 13 in light of the claims, the specification, and the file history of the '512 Patent, one of ordinary skill in the art would not have understood the preamble to have been limiting to either claim. I do not believe that the preamble is necessary to the scope of the claim, because the body of the claim is complete without the preamble. In other words, claim 1 could read, "A method comprising: . . ." together with the remainder of the steps of claim 1 and would have been completely understandable to the person of ordinary skill in the art. The same is true for claim 13. It could read, "A system comprising: . . ." and it still would have been understandable to a person of ordinary skill in the art.

CX-0003C (Balakrishnan WS) at Q/A 191.

This is Comcast's entire argument:

The preamble of a patent claim is limiting when "breathes life and meaning into the claim" *In re Wertheim*, 541 F.2d 257 (CCPA 1976). It does just that here. The claims recite an alert that is provided upon "determining neither a first tuner nor a second tuner are available to perform the requested tuning operation." This is the "conflict" condition described in the preamble, and explains why, when the first tuner and second tuner are occupied, the user must cancel a function to free a tuner. This is disclosed clearly in the specification. JX-0006 at 10:25-47, Figs. 4(b), 4(c). The limitation imposed by the "conflict" condition is consistent with the opinions expressed by Rovi's own expert, who opined that the first and second tuner are not occupied until the "nth tuner" (i.e., the last tuner) is occupied. Tr. 329:23 – 330:15.

Resps. Br. at 171.

Rovi's entire reply is:

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Respondents contend that the preambles of claims 1 and 13 are limiting. Resps. Br. at 170-71. Respondents, however, failed to address the construction of the preambles in their Pre-Hearing Brief and have waived any argument that the preamble is limiting. Resps. P.H. Br. at 510-47; G.R. 7. And, in any event, the preamble is not limiting for the reasons established in Rovi's Post-Hearing Brief. Compls. Br. at 135.

Rovi Reply at 46.

Comcast does not address the preambles in its reply. *See generally* Resps. Reply at 50-76 (discussing the '512 Patent).

The parties have requested the administrative law judge to construe subparts of the preambles (*e.g.*, “resolving a conflict when multiple operations are performed using multiple tuners” and “interactive television program guide”). The parties do not explain why it is necessary to construe further the entire preambles (the only words not separately construed are “1. A method for . . . [resolving a conflict] . . . controlled by an . . . [IPG] . . . , the method comprising:” and “13. A system for . . . [resolving a conflict] . . . controlled by an [IPG] . . . , the system comprising:”). The administrative law judge has determined it is not necessary to rule on the preambles where the constituent parts are already addressed separately. *Cf. Sulzer Textil, O2 Micro, Biotec Biologische Naturverpackungen*, and *U.S. Surgical Corp.*

### (2) Tuner

The term “tuner” appears throughout the claims and specification. The parties have proposed the following constructions:

Rovi's Proposed Construction	Comcast's Proposed Construction
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Rovi's Proposed Construction	Comcast's Proposed Construction
hardware and/or software that obtains the portion of the input signal that is requested by the user	“The term ‘tuner’ is used in its plain and ordinary sense in the ‘512 patent to refer to a device that tunes or selects a desired TV channel, <i>i.e.</i> a desired frequency out of an entire frequency band: ‘[t]he unprocessed television signal on line 206 is provided to set-top box 112. The unprocessed television input signal on line 206 is then received by tuner 202 and tuner 204 which process the signal by decoding it and <i>tuning to desired television channels.</i> ’ JX-0006 (‘512 patent) at 6:19-23 (emphasis added); RX-0847C (Bederson RWS) at Q/A 17.”

See Rovi Br. at 135; Resps. Br. at 171.

Rovi argues:

One of ordinary skill in the art would have understood the claim term “tuner” to mean “hardware and/or software that obtains the portion of the input signal that is requested by the user.” CX-0003C (Balakrishnan WS) at Q/A 198-99; 202-05. For example, Figures 2(a) and 2(b) show two “tuners” having, as input, the raw “television input signal” received from the head end, and, as output, “processed signals”—*i.e.*, the portion of the input signal requested by the user—that are sent directly to the television or the VCR for playback or recording. *Id.* at Q/A 203. The ‘512 Patent specifically states that a digital tuner may include additional components, such as a Q/AM demodulator—a component essential for creating the “processed signal” by extracting information from the received, and selected, raw television signal. JX-0006 (‘512 Patent) at col. 5, lns. 36-58; CX-0003C (Balakrishnan WS) at Q/A 202; RX-0847C (Bederson RWS) at Q/A 7; Balakrishnan Tr. 369.

As shown in the ‘512 Patent, the two tuners, 202 and 204, “process” the received and selected signal by “decoding it and tuning to desired television signals” which are then output as “processed signals” to television equipment. JX-0006 (‘512 Patent) at col. 6, lns. 20-23; CX-0003C (Balakrishnan WS) at Q/A 39. The ‘512 Patent specification discloses numerous examples of tuners, including, among others, digital tuners, which may contain an analog tuner, a decoder such as an MPEG-2 decoder, a demodulator, such as a quadrature amplitude modulation

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(“Q/AM”) demodulator, and a demultiplexer such as a MPEG-2 demultiplexer that is used to extract the portion of the television input signal that is desirable to the user and corresponds to a particular television program or channel. JX-0006 (’512 Patent) at col. 5, lns. 44-58; CX-0003C (Balakrishnan WS) at Q/A 40. Thus, as understood from the specification, the “tuner” obtains the user’s desired television channel, outputs a *processed* signal for that channel that can be played back on a television or be recorded, and may include other components, such as a Q/AM demodulator or MPEG-2 demultiplexer necessary for processing the received signal into a signal viewable on a television.

Respondents contend that “tuner” means “an electronic circuit used to selectively receive RF signals in a desired frequency channel and convert them into audio and video signals.” Respondents’ construction is far too limiting with respect to the term “electronic circuit” and “to selectively receive RF signals in a desired frequency channel.” CX-0003C (Balakrishnan WS) at Q/A 206 (emphasis added). Respondents’ construction also seeks to impermissibly limit the claimed “tuner” *only* to a device for selecting a signal; excluding from the scope of the claimed “tuner” (at least in their expert’s non-infringement opinions) the processing of the signal—and the components (Q/AM demodulator and MPEG-2 demultiplexers)—that do the processing. Tuners, as used in the ’512 Patent, are not limited solely to an electronic circuit for receiving only in “a” (singular) “desired frequency channel.” As relevant to the infringement dispute, Respondents contend—in direct contradiction to the teachings of the ’512 Patent—that the Q/AM demodulators in the accused products cannot be part of the “tuner” because the “tuner” and “Q/AM demodulators” are separate electronic circuits. *But see* JX-0006 (’512 Patent) at col. 5, lns. 44-58 (discussing the “digital tuner” as including a “Q/AM demodulator” among other components necessary for “processing” the received and selected raw television signal into a signal viewable on television).

Rovi Br. at 135-137.

Comcast argues:

The term “tuner” is used in its plain and ordinary sense in the ’512 Patent to refer to a device that tunes or selects a desired TV channel, *i.e.* a desired frequency out of an entire frequency band: “[t]he unprocessed television signal on line 206 is provided to set-top box 112. The unprocessed television input signal on line 206 is then received by tuner 202 and tuner 204 which process the

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signal by decoding it and *tuning to desired television channels.*” JX-0006 (‘512 Patent) at 6:19-23 (emphasis added); RX-0847C (Bederson RWS) at Q/A 17. But this meaning cannot encompass all hardware or software “that *obtains* the portion of the input signal that is requested by a subscriber” as Rovi contends. RX-0847C at Q/A 6. Rather, the tuner performs the particular function of selecting a particular frequency containing the desired channel. RX-0847C at Q/A 14. The STB contains additional equipment, beyond the tuner, to process the selected channel. *See* JX-0006 at 5:44-58; RX-0847C (Bederson RWS) at Q/A 7. Rovi’s proposal sweeps in all of this additional equipment that is used for extracting content for viewing (*i.e.* anything that “obtains the portion of the input signal”), rather than equipment that tunes to the relevant channel. RX-0847C at Q/A 6, 14. Video processing software, as well as numerous pieces of hardware (*e.g.*, antennas, processors, wiring) would all be swept in to Rovi’s construction.

In contrast, Respondents’ construction is fully supported by the specification and the claims. The very disclosure that Rovi relies upon makes clear that the tuner must select a particular frequency, even though the extended tuner architecture may include additional components to process the selected frequency, separate from the tuner and that components such as the demodulator (*i.e.* components other than the “tuner”) are included and necessary to extract/process the desired signal, but are not used to select the specific frequency required. *See* RX-0847C at Q/A 7; JX-0006 at 5:44-58 (cited by Dr. Balakrishnan in CX-0003C at Q/A 202).

“Tuner” is also defined, in the dictionary definition used by Rovi’s own expert (*see* CX-0003C (Balakrishnan WS) at Q/A 201), as a “*circuit or device that can be set to select one signal from a number of signals in a frequency band.*” RDX-1203 (RX-0307 (The Illustrated Dictionary of Electronics, 7<sup>th</sup> Ed.) at 683); RX-0847C at Q/A 11. But despite relying on this definition, Rovi still proposes a construction that eliminates the concept of (1) a circuit, or (2) selecting a signal from the incoming range of frequencies. In contrast, additional components, other than the “tuner,” such as the demodulator (such as the Q/AM demodulator discussed in JX-0006 (‘512 Patent) at 5:44-58) have the role of recovering information from the selected frequency. *See* RX-0846C (Garcia WS) at Q/A 16-18. Rovi’s proposal of “obtains the portion of the input signal,” appears aimed at capturing these components, which are not a “tuner.” For example, the dictionary Dr. Balakrishnan cites also defines a demodulator as “a circuit that recovers the information from a modulated analog or digital signal;” Dr. Balakrishnan agreed to the



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same definition during deposition. RX-0307 (The Illustrated Dictionary of Electronics, 7<sup>th</sup> Ed.) at 177; RX-0818 (Balakrishnan Dep, Ex. 13); RX-0847C at Q/A 13. He also confirmed that the tuner and Q/AM demodulator are fundamentally different components that perform different steps. RX-0847C at Q/A 14. This raises greater questions about the breadth of Rovi's proposal.

Rovi's construction also extends to "software" tuners. But there is no disclosure, either in the intrinsic or extrinsic record, of any "software" tuners, and it is altogether unclear what such a "software" tuner would be. CX-0003C (Balakrishnan WS) at Q/A 204-205 (relying on his belief the patent does not foreclose software tuners, rather than any actual disclosure). In fact, Rovi's expert testified that software that captures frames of video (*e.g.*, performs a freeze frame), would be swept into Rovi's construction of "tuner," because it "obtain[s] the portion of the input signal that is requested by the user." RX-0847C (Bederson RWS) at Q/A 15. This breadth is untenable. And of course, it ignores the very dictionaries that Rovi cites, all of which disclose a "tuner" at the time of the invention as hardware (*e.g.*, a circuit). RX-0847C (Bederson RWS) at Q/A11; RX-0307 (The Illustrated Dictionary of Electronics, 7<sup>th</sup> Ed.) at 683; RX-0862 (Mod. Dictionary of Elecs (1999)) at 807 (defining tuner as "[a] radio or TV receiving circuit); RDX-1207 (RX-0817 (DTV Handbook) at 415-16 (2001 textbook describing a digital tuner as an electronic circuit); RX-0847C at Q/A 17 (Rovi's expert agreeing that the DTV handbook was a text a POSITA might reference to understand the term "tuner" at the time of invention, as shown in RDX-1208).

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Resps. Br. at 171-74 (Comcast's final paragraph about a "tuning operation" is omitted).

Rovi replies:

A "tuner" is "hardware and/or software that obtains the portion of the input signal that is requested by the user." Compls. Br. at 135-37. Respondents contend that Rovi's construction is improper because, under Rovi's proposed construction, the tuner does more than "perform[] the particular function of selecting a particular frequency containing the desired channel." Resps. Br. at 171 (ignoring that under Respondents' proposed "tuner" construction the "tuner" also does more than "select a particular frequency"—it also "converts" the selected signals "into audio and video signals."). Specifically, Respondents' criticize Rovi's use of the word "obtaining" in its proposed construction, because use of this

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word improperly “sweeps in . . . additional equipment that is used for extracting content for viewing (*i.e.*, anything that ‘obtains the portion of the input signal’), rather than the equipment that tunes to the relevant channel.” *Id.*

As a threshold, Rovi does not place any particular emphasis on the word “obtains” in its proposed construction of “tuner.” Rovi would take no issue with replacing the word “obtains” in its proposed construction with the use of the word “select” (as in Respondents’ proposed construction) or the use of the word “extract” (as used in the ‘512 Patent specification, JX-0006 (‘512 Patent) at col. 5, ln. 56). *See generally* Compls. Br. at 136.

The crux of the dispute related to this term comes down to its application in the infringement analysis and whether the “tuner”—in addition to including components necessary to “obtain” (or “select” or “extract”) a portion of the input signal—may also include components (like “Q/AM demodulators”) necessary to “process” the selected signal into the portion of the signal “requested by the user.” Compls. Br. at 135-37 (Rovi setting forth evidence showing that the “tuner” in the ‘512 Patent may do more than signal selection—it may also process the signal into an output viewable by the user); Resps. Br. at 171 (criticizing Rovi’s construction for “sweep[ing] in . . . additional equipment that is used for extracting content [from the selected signal] for viewing . . .”). But, and contrary to Respondents’ criticisms, the specification makes clear that in addition to selecting a portion of the input signal, the “tuner” may also “process” the selected signal and may therefore contain the “additional components” necessary to perform this “processing.” Compls. Br. at 135-37 (explaining that the disclosed embodiments in Figs. 2(a) and 2(b) show a “processed” signal output by the “tuners” and that the specification (JX-0006 (‘512 Patent) at col. 5, lns. 44-58) discloses an embodiment of a “digital tuner” including the components necessary for this “processing” such as “an MPEG-2 decoder,” a “quadrature amplitude modulation (‘Q/AM’) demodulator,” and an “MPEG-2 demultiplexer.”).

That the “tuner” may additionally “process” the obtained (or selected or extracted) signal, and may therefore contain the additional components (like “Q/AM demodulators”) necessary for that processing, is recognized by both parties’ constructions of this term. Rovi’s construction requires that the “tuner” “obtain” (or “select” or “extract”) the “portion of the input signal that is requested by the user.” *See* Compls. Br. at 135 (Rovi explaining that the “portion of the input signal requested by the user”

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corresponds to what the user has “requested” to view on his or her television—*i.e.* it is the selected and processed signal). Similarly, Respondents’ construction requires that the “tuner” “selectively receive RF signals in a desired frequency channel *and* convert them into audio and video signals.” *Id.* (emphasis added). Without additional components like the “Q/AM demodulator,” there is no “conversion” of the “selectively received RF signals . . . into audio and video signals” as Respondents’ construction requires. *Id.* at 159 (testimony by Comcast engineer Albert Garcia confirming that without a Q/AM demodulator, there is no “conversion” of the selected signal into audio and video signals); *id.* at 135-37.

Thus, embodiments where the claimed “tuner” additionally processes the selected portion of the input signal—and the components that do that additional processing (such as a Q/AM demodulator)—*should not* be excluded from the proper construction of this term (or the application of this term to the infringement dispute). Compls. Br. at 136-37.

Rovi Reply at 47-48.

Comcast replies:

Rovi declines to rely upon the dictionary definition that its own expert, Dr. Balakrishnan, identifies as the plain and ordinary meaning of “tuner”: “circuit or device that can be set to select one signal from a number of signals in a frequency band.” CX-0003C (Balakrishnan WS) at Q/A 201-202. Respondents’ construction however, is consistent with this dictionary definition, and the ‘512 disclosure, and makes clear the concept that a tuner selects a single frequency out of many. RX-0847C (Bederson RWS) at Q/A 11, 16-17.

Rovi’s criticism of Respondents’ construction, based on discussion regarding Q/AM demodulators and “processing a signal,” is misguided. The sole point of Respondents’ discussion on this issue is that a Q/AM demodulator “by itself cannot be a ‘tuner.’” *Id.* at Q/A 7-10, 13-14. This would eliminate the central role of a tuner, as described in Dr. Balakrishnan’s own cited dictionary definition is “selecting a signal” (*i.e.*, RF frequency). *Id.* at Q/A 14; *see also* JX-0006 (‘512 Patent) at 5:44-58; 6:19-23. And Rovi never addresses the over-breadth of its construction which can encompass *anything* that *obtains a portion* of the desired signal; this could entail equipment before the tuner, such as an antenna,

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and equipment after the tuner, such as frame capture software. RX-0847C at Q/A 6, 15.

Rovi's argument that Respondents' construction excludes "processing," is also incorrect. Respondents' construction recites "convert[ing] the [selected frequency] into audio and video signals," which is a type of "processing." And further, Rovi's argument that Respondents' construction excludes "processing" is inconsistent with the opinion of Rovi's own expert, who argues that Respondents' construction requires processing to create audio/video signals. CX-0003C at Q/A 347 ("Each of the four boxes, however, would not meet Comcast's construction for tuner, because Comcast's construction further requires that the tuner convert the RF signal . . ."). Rovi's arguments are mere distractors, and fail to address the fundamental shortcoming of its proposal—it eliminates "selecting of a frequency" which is the core function of a "tuner." In fact, under Rovi's construction, a component that performs *only* the processing (e.g., extraction of a signal, such as performed by a Q/AM demodulator) would constitute a "tuner." *Id.*; RX-0847C at Q/A 8-10, 14-17. This simply cannot be correct, as no POSITA would understand a Q/AM demodulator to be a "tuner" in any sense of the term. *See* RX-0847C at Q/A 10, 14.

Resps. Reply at 50-51.

The administrative law judge construes "tuner" to mean "an electronic circuit used to selectively receive a desired frequency out of an entire frequency band." *See* RX-0847C (Bederson RWS) at Q/A 5; RDX-1203 (RX-0307 (The Illustrated Dictionary of Electronics, 7th Ed.) at 683); RX-0862, Mod. Dict. of Elecs. (1999) at 807; RX-0817 (DTV Handbook, The Revolution in Digital Video).

Rovi's construction is unduly broad, insofar as it replaces a known, discrete, physical component with a broad conception of the term.<sup>143</sup> For example, Rovi's construction offers that

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<sup>143</sup> Although Rovi's construction is predominately functional, that alone is not necessarily improper. *See Funai Elec. Co., Ltd. v. Daewoo Electronics Corp.*, 616 F.3d 1357, 1366 (Fed. Cir.2010) ("The use of . . . functional language to construe and explain a claim term is not improper. A description of what a component does may add clarity and understanding to the meaning and scope of the claim."). However, construing the claim as Rovi suggests would

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a tuner is essentially “[anything] that obtains the portion of the input signal that is requested by the user.”<sup>144</sup> This construction would also categorize unrelated components, such as an antenna, as a tuner. Rovi’s construction thus impermissibly expands the meaning that one of skill in the art would have attributed to a tuner at the time of the invention, to include software tuners. *See* RX-0847C (Bederson RWS) at Q/A 17-17.

Comcast’s construction comports with the specification’s description of the tuner: “[t]he unprocessed television signal on line 206 is provided to set-top box 112. The unprocessed television input signal on line 206 is then received by tuner 202 and tuner 204 which process the signal by decoding it and tuning to desired television channels.” JX-0006 (‘512 Patent) at 6:19-23 (emphasis added); RX-0847C (Bederson RWS) at Q/A 17 (Dr. Bederson explains that “‘Tuner’ is used in its plain and ordinary sense in the ‘512 patent, to refer to a device that tunes to a desired frequency (*i.e.*, that could be carrying a desired television program).”).

Further, the extrinsic evidence Rovi and Comcast cite indicate that a tuner is a circuit:

- “Tuner” is also defined, in the dictionary definition used by Rovi’s own expert (*see* CX-0003C (Balakrishnan WS) at Q/A 201), as a “*circuit or device that can be set to select one signal from a number of signals in a frequency band.*” RDX-1203 (RX-

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broaden the term in a manner that undermines the public notice function. *See Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996) (“Where there is an equal choice between a broader and a narrower meaning of a claim, and there is an enabling disclosure that indicates that the applicant is at least entitled to a claim having the narrower meaning, we consider the notice function of the claim to be best served by adopting the narrower meaning.”); *see also White v. Dunbar*, 119 U.S. 47, 51-52 (1886) (“Some persons seem to suppose that a claim in a patent is like a nose of wax, which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. The context may, undoubtedly, be resorted to, and often is resorted to, for the purpose of better understanding the meaning of the claim; but not for the purpose of changing it, and making it different from what it is. The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.”).

<sup>144</sup> With regard to extrinsic evidence, Rovi’s construction is only supported by expert testimony.

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0307 (The Illustrated Dictionary of Electronics, 7<sup>th</sup> Ed.) at 683); RX-0847C (Bederson RWS) at Q/A 11.

- RX-0862, Mod. Dict. of Elecs. (1999) at 807 (emphasis added): “Tuner: in the broad sense, a device for tuning. Specifically, in radio-receiver practice: 1. A packaged unit capable of producing only the first portion of the functions of a receiver and delivering the rf, IF, or demodulated information to some other equipment. 2. That portion of a receiver that contains the circuit that are tuned to a resonance at the received-signal frequency and those which are tuned to the local-oscillator frequency. 3. *A radio or TV receiving circuit*; a high-fidelity component containing such circuits.”
- See also RX-0817 (DTV Handbook, The Revolution in Digital Video), which Dr. Balakrishnan agreed that was a text a person of ordinary skill in the art might reference to understand the term “tuner” at the time of invention. The “tuner” description from RX-0817 is reproduced below:

### 10.2.1 Tuner

The basic tuner, illustrated in Figure 10.2, receives the 6 MHz signal (UHF or VHF) from an external antenna [2]. The tuner is a high-side injection double-conversion type with a first IF frequency of 920 MHz. This puts the image frequencies above 1 GHz, making them easy to reject by a fixed front-end filter. This selection of first IF frequency is high enough that the input bandpass filter selectivity prevents the local oscillator (978 to 1723 MHz) from leaking out the tuner front end and interfering with other UHF channels; yet, it is low enough for the second harmonics of UHF channels (470 to 806 MHz) to fall above the first IF bandpass. Harmonics of cable channels could possibly occur in the first IF passband but are not a significant problem because of the relatively flat spectrum (within 10 dB) and small signal levels (–28 dBm or less) used in cable systems.

### (3) Multiple tuners

The term “multiple tuners” appears in claims 1 and 13 and in the specification. The parties have proposed the following constructions:

Rovi’s Proposed Construction	Comcast’s Proposed Construction
“multiple tuners” has its plain and ordinary meaning, where the plain and ordinary meaning is “more than one tuner.”	Comcast does not clearly present a construction in its post-hearing brief.

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See Rovi Br. at 137; Resps. Br. at 182.

Rovi's entire argument for this term follows:

One of ordinary skill would have understood the term "multiple tuners" to have its plain and ordinary meaning of "more than one tuner." CX-0003C (Balakrishnan WS) at Q/A 207. The specification is consistent with this meaning. *Id.*

Respondents contend that "multiple tuners" does not need to be construed; however, should construction be deemed necessary, they contend that the term should be construed as—"at least two different tuners for selecting RF signals in different frequency channels." Respondents' construction is redundant and it unnecessarily and improperly adds the word "different"—there is no requirement that "multiple tuners" be "different" electronic circuits that each receive signals in "different frequency channels." CX-0003C (Balakrishnan WS) at Q/A 207. *See Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1055 (Fed. Cir. 2009) (affirming Commission holding that ALJ's claim construction that required a second and third circuit "be entirely distinct without common circuit elements" was too narrow, because the second and third circuits could contain overlapping components). Contrary to this authority, and as applied by Respondents' expert in the infringement dispute, Respondents contend that the identified "tuners" must be entirely distinct electronic circuits and that no "tuner" can share any circuit or component with any other "tuner."

Rovi Br. at 137-38.

This is Comcast's entire argument:

During prosecution of the '952 application, which is in the same family as the '512 Patent, the inventors distinguished their invention from the prior art by explaining the difference between the multiple tuners of their invention, and a single tuner used in cited prior art. *See* RX-0360.483 (U.S. Patent Application No. 11/147,952) ("the '952 Application") (arguing past rejection based on Banker, stating "In Banker, 'multiple services provided on the physical channel may be accessed using only a single tuner . . . Banker never discusses providing multiple services using multiple tuners.'"); *see also* RX-0847C (Bederson RWS) at Q/A 42-45.

The applicant also acknowledged that multiple services – such as video and text – could be obtained using a single tuner, and that this would fall outside the scope of their invention. *Id.* The

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invention required that the multiple programs (services) be provided using multiple tuners.

And while the parties' constructions may not seem far apart, Rovi somehow reads their construction, of "more than one tuner" ("multiple tuners") and "a tuner other than the 'first tuner'" ("second tuner") to encompass anything that outputs multiple programs. This is an impermissible attempt to recapture claim scope in an attempt to read the asserted claims on the accused products which, like Banker, contain a single tuner to provide multiple services. *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1379 (Fed. Cir. 2008) (Patentee cannot "recapture claim scope disavowed during prosecution to prove infringement.")

Resps. Br. at 182.

Rovi replies:

Having construed the term "tuner," there should be no real dispute between the parties regarding the meaning of the claim term "multiple tuners." Compls. Br. at 137 (explaining that under Rovi's construction "'multiple tuners' has its plain and ordinary meaning . . . [of] 'more than one tuner'" and that Respondents' construction is, in relevant part, "at least two different tuners.>"). While the parties' constructions are facially similar, Respondents apply these constructions in the infringement context to require that the "multiple tuners" comprise wholly different, and entirely separate, tuner circuits—such that no one "tuner" can share any components or circuits with any other "tuner." Resps. Br. at 182. Thus, while not expressly stated within their proposed construction for this term—Respondents' application of these claim terms in the infringement context is tantamount to adding a requirement to both constructions that "multiple tuners" requires "at least two wholly different tuners where those at least two wholly different tuner circuits do not overlap at all and do not share any components." *Id.* Any such addition to either parties' proposed construction (or application as such in the infringement context) is inconsistent with how the term "multiple tuner" is used in the '512 Patent as well as binding Federal Circuit case law. Compls. Br. at 152-160 (explaining why the Accused Products have "multiple tuners."); *see also id.* at 137 (citing the Federal Circuit's *Linear Technologies* case, and explaining that the Federal Circuit reversed a finding that required that the claimed "second circuit" and "third circuit" be entirely separate and non-overlapping circuits to find



infringement, just as Respondents' incorrectly argue here), 159 (same)).

Moreover, and in support of their attempt to exclude the X1 Accused Products from infringement, Respondents point to a statement made by the applicants in the '952 application that they assert shows that Rovi has "disclaimed" infringement by circuits—like the Broadcom RF Front End SoCs in the Accused Products. Resps. Br. at 182. In support of their "disclaimer" assertion, Respondents mischaracterize the patentees' statements during the prosecution of the '952 application regarding the Banker reference. *Id.*

As the patentees correctly explained during the prosecution of the '952 application: "Banker focuses on a system that combines video signals into a composite video signal and creates virtual channels, so that *only a single tuner is necessary*." RX-0360 (App. No. 11/147,952) at 483 (emphasis in original). The single tuner in Banker does not output multiple separate television channels (or multiple separate streams of "converted audio and video signals"), as Respondents contend. Resps. Br. at 182. Instead, and entirely unlike the claims of the '512 Patent (and entirely unlike the Broadcom RF Front End SoC contained in each of the X1 Accused Products) the *single* tuner in Banker outputs a *single* video channel that is a composite of four channels. RX-0150 (Banker) at col. 15, ln. 41 – col. 16, ln. 12; RX-0360 (App. No. 11/147,952) at 483. In Banker there is only *one* tuner (not multiple tuners) and that one tuner outputs only one channel that is a composite of four different channels:

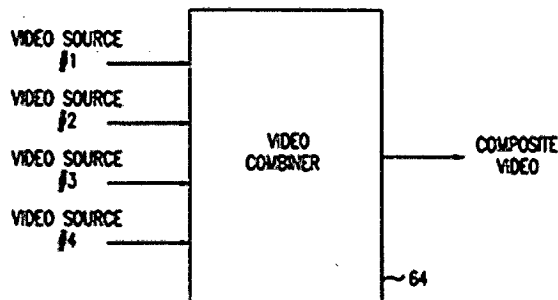


FIG.1B

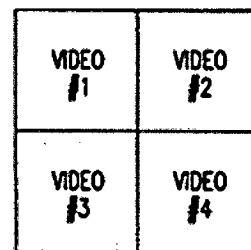


FIG.1C

RX-0150 (Banker) at 3 (Figs 1(B) and 1(C); *see also* col. 8, ln. 36 – col. 9, ln. 12). Thus, the patentees' statements regarding Banker in the prosecution of the '952 application are not "clear and unambiguous" disavowals of claim scope and do not prevent a claim construction broad enough to encompass the Broadcom

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chips in the X1 Accused Products. Compls. Br. at 152-60; *Inline Plastics Corp. v. EasyPak, LLC*, 799 F.3d 1364, 1369 (Fed. Cir. 2015).

Rovi Reply at 49-51 (footnote omitted).

Comcast replies:

Rovi misrepresents *Linear Tech. Corp. v. ITC* to argue that it is improper to construe “multiple tuners” as consisting of “different” circuits. *Linear Tech.* does not stand for the broad proposition for which Rovi offers it; it has distinct facts and its holding is inapplicable to this Investigation.

In *Linear Tech.* the asserted claim recited a “second circuit” and “third circuit” that each had different functions. *Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1055 (Fed. Cir. 2009). The asserted patent in *Linear Tech.* “expressly disclose[d] that the ‘second circuit’ and ‘third circuit’ can share common components.” *Id.* at 1055. And this was uncontested. Rather, the proposal of “different” circuits was intended to advocate that “the distinct component[s] [of the second circuit and third circuit] must aid in the function of the [respective] claims circuits.” *Id.* at 1055-56. But the Federal Circuit found this distinction unnecessary, because the claim language already required the components of the second circuit and third circuit aid in performing each circuit’s respective function. *Id.* In contrast, Rovi’s ‘512 Patent recites a “first tuner” and “second tuner,” wherein “both [tuners are] capable of performing the tuning operation.” Unlike *Linear Tech.*, the first/second tuner of the ‘512 Patent do not recite different functions that may share common components, but are *each* explicitly required to be able to perform the same function, and the specification of the ‘512 consistently teaches the use of two *distinct* tuners. See, e.g., JX-0006 (‘512 Patent) at Fig. 2b (annotated to show the two distinct tuners):

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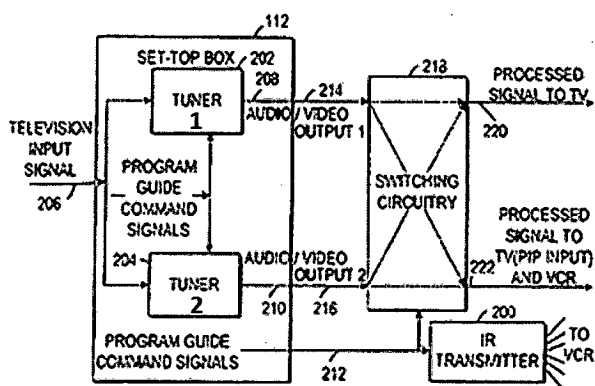


FIG. 2(b)

In addition, the Federal Circuit in *Linear Tech.* made clear that the “second circuit” and “third circuit” of the asserted patent should be accorded their full scope due to the absence of any limiting disclosure or prosecution history. *See Linear Tech.*, 566 F.3d at 1055. In contrast, the applicants for Rovi’s ‘512 Patent disavowed claim scope during prosecution when arguing past the Banker reference. In particular, the ‘512 applicants distinguished Banker because it *used a single tuner* to output multiple channels *rather than multiple tuners*. *See* RX-0847C (Bederson RWS) at Q/A 43-45; RX-0360.0483 (‘952 file history) (“In Banker, ‘multiple services provided on the physical channel may be accessed using only a single tuner.’ . . . Banker never discusses providing multiple services using multiple tuners.”). Allowing each of the multiple tuners (e.g., the first tuner and second tuner) to share *even the components responsible for tuning*, as Rovi contends, would render the limitation, and the applicants’ statements during prosecution, meaningless. And it would allow Rovi to recapture claim scope that the inventors clearly ceded when arguing past Banker. Further, Rovi’s expert never addressed either the Banker reference or the applicant’s remarks to argue past Banker, and, as such, Dr. Bederson’s opinions regarding Banker, and the limitations it must impose on the claims of the ‘512 Patent, stand un rebutted.

Resps. Reply at 52-53.

The administrative law judge construes “multiple tuners” to mean “more than one tuner.”

The patent uses the word “multiple” in a plain and ordinary manner, and Rovi’s proposed construction comports with the claim language, and does not expand or narrow the claim

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language. The administrative law judge already construed “tuner” to mean “an electronic circuit used to selectively receive a desired frequency out of an entire frequency band.”

(4) *A second tuner*

The term “second tuner” appears principally in the claims and occasionally in the specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
“a second tuner” has its plain and ordinary meaning, where the plain and ordinary meaning is “a tuner other than the ‘first tuner.’”	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 138; Resps. Br. at 182.

Rovi’s entire argument for this term follows:

One of ordinary skill in the art would have understood that the term “a second tuner” has its plain and ordinary meaning of “a tuner other than the ‘first tuner.’” CX-0003C (Balakrishnan WS) at Q/A 208. The ‘512 Patent specification refers to the “second or ‘other’ tuner.” JX-0006 (‘512 Patent) at col. 10, lns. 28-34, col. 10, lns. 49-54.

Rovi and Respondents agree that the meaning of “second tuner” is *not* limited to any particular tuner, such as, for example, the “last allocated” tuner (a concept Respondents introduce in their proposed construction of “cancel the function of the second tuner” discussed below). CX-0003C (Balakrishnan WS) at Q/A 208. Both sides agree that the “second tuner” is simply another or a “different” tuner, without any further limitations. Both side’s constructions for “a second tuner” are therefore consistent with the rule that “[t]he use of the terms ‘first’ and ‘second’ is a common patent-law convention to distinguish between repeated instances of an element or limitation.” *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003). Thus, in the context of the claims of the ‘512 Patent, the use of the terms “first tuner” and “second tuner” is equivalent to a reference to “tuner A” and “tuner B,” and does not impose any serial or temporal limitation onto the claims – something the parties appear to agree to as to the term “a second tuner” (but dispute as to the “cancel a function of the second tuner” term discussed below).

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Rovi Br. at 138.

Comcast presents its argument for this term along with the “multiple tuners” term. *See* Resps. Br. at 182.

Rovi’s entire reply is:

Respondents group their arguments regarding the construction of “a second tuner” together with their arguments for “multiple tuners.” Resps. Br. at 182. Nonetheless, and importantly (because it relates to the construction of “cancel a function of *the* second tuner” discussed below), Respondents’ ignore the fact that both sides agree that the “a second tuner” is simply another or a “different” tuner—without any further qualification or limitation. *See id.*

Rovi Reply at 51.

Comcast presents its reply for this term along with the “multiple tuners” term. *See* Resps. Reply at 52-53.

The administrative law judge construes “second tuner” to mean “a tuner other than the first tuner.” The administrative law judge construed “tuner” to mean “an electronic circuit used to selectively receive a desired frequency out of an entire frequency band.” The remaining dispute thus focuses on the word “second.” The patent uses the word in a plain and ordinary manner, and Rovi’s proposed construction comports with this usage. *See also Linear Tech. Corp. v. Int’l Trade Comm’n*, 566 F.3d 1049, 1055 (Fed. Cir. 2009) (“We agree with the Commission’s construction of ‘second circuit’ and ‘third circuit,’ defining the terms broadly to not require entirely separate and distinct circuits. Indeed, there is nothing in the claim language or specification that supports narrowly construing the terms to require a specific structural requirement or entirely distinct ‘second’ and ‘third’ circuits.”); *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003) (“The use of the terms ‘first’ and ‘second’ is a common patent-law convention to distinguish between repeated instances of an

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element or limitation. . . . In the context of claim 1, the use of the terms ‘first . . . pattern’ and ‘second . . . pattern’ is equivalent to a reference to ‘pattern A’ and ‘pattern B,’ and should not in and of itself impose a serial or temporal limitation onto claim 1.”).

- (5) *Cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation*

The phrases “cancel the function” and “cancel a function” only appear in the claims. The full text of the disputed phrase only appears in claim 11. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
Stop a function utilizing a signal tuned to by the second tuner in order to permit the requested function utilizing a signal tuned to by the second tuner to be performed.	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 142; Resps. Br. at 174-78.

Rovi argues:

One of ordinary skill in the art would have understood the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” to mean “stop a function utilizing a signal tuned to by the second tuner in order to permit the requested function utilizing a signal tuned to by the second tuner to be performed.” CX-0003C (Balakrishnan WS) at Q/A 228-229.

Respondents contend that the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” should be construed as “terminate a function being performed by the *last allocated tuner* so it can perform the requested tuning operation.” (emphasis added). The parties’ primary dispute involves whether “second tuner,” in this phrase only, is limited to the “last allocated tuner” (as in Respondents’ proposed construction). As discussed above in Section VI(C)(2)(d), the parties agreed that “second tuner” refers to a tuner that is not the first tuner, without any other limitations with respect to time or sequence. “A word or phrase *used consistently* throughout a claim should be *interpreted consistently*.” *Epcon Gas*

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*Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1031 (Fed. Cir. 2002) (emphasis in original) (*quoting Phonometrics, Inc. v. Northern Telecom Inc.*, 133 F.3d 1459, 1465 (Fed. Cir. 1998)).

In addition to being inconsistent with Respondents' construction of "second tuner," Respondents improperly place a temporal limitation on the second tuner that does not exist in the intrinsic evidence. Respondents appear to be relying on the term "second" to connote sequence or time: "*last* allocated," which violates the rule that "[t]he use of the terms 'first' and 'second' is a common patent-law convention to distinguish between repeated instances of an element or limitation." *3M Innovative Props.*, 350 F.3d at 1371.

Further, there is no support in the intrinsic record for requiring that the second tuner be the "last allocated" tuner. The claims refer to a "first tuner" and a "second tuner," *i.e.*, two instances of a tuner, not to a "last allocated" tuner; no other claim term imposes any time or sequence limitation on the "first" and "second" tuners. CX-0003C (Balakrishnan WS) at Q/A 230; Balakrishnan Tr. 370. The term "first" does not mean "first in time" or "first allocated" and the term "second" does not mean "second in time" or "second allocated" or even "last allocated." *Id.* Said differently, the claim could just as easily have said "tuner A" and "tuner B" and meant the same thing. *Id.*; *see also 3M Innovative Props.*, 350 F.3d at 1371. Indeed, and consistent with the intrinsic record, the "second tuner" can be utilized first in time to record or view television programming and the "first tuner" can be utilized second in time.

The specification likewise does not support limiting the "second tuner" to be the "last allocated tuner." Respondents rely on Figure 3(b) as their sole support for their read-in "last allocated" addition. RX-0847C (Bederson RWS) at Q/A 26. However, Figure 3(b) is not the sole embodiment of the invention; it is nothing more than an example or illustration, as it is referred to in JX-0006 ('512 Patent) at col. 2, lns. 49-53, and it is even further limited to only the configuration of Figure 2(a), which is itself merely an example. JX-0006 ('512 Patent) at col. 2, lns. 34-38; CX-0003C (Balakrishnan WS) at Q/A 230. The mere fact that in *one example* in the specification the "second tuner" is utilized second in time as opposed to first in time does not, as a matter of law, mandate that the claims be limited in all instances to utilizing the tuners in this sequence. *Phillips*, 415 F.3d at 1320. Figure 3(b) therefore is not limiting at all, but even if it were, Respondents cannot read-in limitations from an exemplary embodiment that do not appear in the '512 Patent claims. *Id.* Nowhere in the specification or elsewhere in the intrinsic evidence is there any disclaimer or

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disavowal that would require that the “second tuner” be limited to the “last allocated” tuner. CX-0003C (Balakrishnan WS) at Q/A 230.

Rovi Br. at 142-44 (footnote omitted).

Comcast presents arguments for the phrases “cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation” / “cancel a function” / “function of the second tuner” together:

There is a substantial difference in the parties’ constructions. Rovi treats “first tuner” and “second tuner” as interchangeable, and essentially states that as long as the function of any tuner is offered for cancelation, that tuner can be the “second tuner.” RX-0847C (Bederson RWS) at Q/A 22 (discussing Dr. Balakrishnan’s deposition testimony). Respondents’ construction treats the “second tuner” as the “last allocated tuner,” which is the nth tuner set in a n tuner system. *Id.* at Q/A 19-21. Even Rovi’s expert admits that a conflict arises when the nth tuner becomes occupied. Tr. 329:23-330:15; RX-0847C at Q/A 26. Respondents’ construction comports with this most fundamental purpose of the invention, and with the intrinsic record. In contrast, Rovi’s litigation inspired construction lacks any support in the intrinsic record, and has the effect of doubling the scope of the asserted claims. And it would have the effect of leaving POSITA’s without any clear indication of whether they are practicing the claim. RX-0847C at Q/A 22 – 24.

The ‘512 Patent discloses a two tuner system, as displayed in Fig. 2(b), and discussed in the flow chart of Fig. 3(b). The first tuner may be occupied by displaying or recording a television program, such as in the box with the text “user has selected a program to view on television and first non-busy tuner is used.” RX-0847C at Q/A 26; RDX-1237 (JX-0006 at Fig. 3(b) (annotated); JX-0006 (‘512 Patent) at 8:17-32. Subsequently, the “other tuner,” which is the “second tuner” in the two tuner system disclosed becomes occupied. For example, by either displaying or recording a second program (e.g., element 308, “program guide uses other tuner to record program”), or element 309, “program guide uses other tuner to provide secondary function”). RX-0847C at Q/A 26; RDX-1238 (JX-0006 at Fig 3(b) (annotated); JX-0006 at 8:33-65, 9:44-59. When a third function is requested, such as in either elements 310 or 311 of Fig. 3(b), the IPG alerts the user with an option to cancel the function of the “other tuner” (elements 312 or 316



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respectively). RX-0847C at Q/A 26; RDX-1239 (JX-0006 at Fig 3(b) (annotated)); JX-0006 at 9:9-36, 9:44-59. Elements 312 or 316 of Fig. 3(b) do not apply until there all the tuners are occupied. RX-0847C at Q/A 26. Because the “last allocated tuner” is occupied, the program guide provides an alert to the screen notifying them of the conflict. *Id.* As is logical, the tuners are allocated in serial fashion (tuner 1, tuner 2, until tuner n), and the conflict is identified when the last-allocated tuner (in this scenario, tuner 2) has been allocated and a new tuning request arrives. JX-0006 at 9:44-59; RX-0847C at Q/A 20.

In contrast, Rovi’s construction is an improper attempt to double the scope of the claims. Rovi’s proposal eliminates the specificity of this claim language, and treats the “first tuner” and “second tuner” as interchangeable for resolving the conflict. RX-0847C at Q/A 21. In essence, Rovi’s construction is premised on the concept that in a two tuner system – containing tuner A and tuner B – that either tuner A or tuner B could be the “first” tuner, regardless of when they were allocated a tuning operation. *See* RX-0847C at Q/A 22. Rovi’s expert testified repeatedly that in a multi-tuner system, any tuner can be the “first tuner,” and any other tuner can be the “second tuner.” RDX-1209C (RX-0810 (Balakrishnan Dep., Ex. 5)); RX-0847C at Q/A 22.

For purposes of “canceling the function of the second tuner,” Dr. Balakrishnan’s testimony makes clear, that in his opinion, “the second tuner” as found in the “displaying...” limitation, does not derive its antecedent basis from “a second tuner” in the “determining...” limitation of claims 1 and 13. RX-0847C at Q/A 22; RDX-1253 (showing ‘512, cl. 1 and antecedent basis for “the second tuner”). Dr. Balakrishnan testified that whichever tuner has its operation canceled, that could be considered the second tuner; even if there is a system with 100 tuners, any two could be the “first tuner” and the “second tuner.” RX-0847C at Q/A 22; *see also*, RDX-1254C (RX-0813 (Balakrishnan Dep., Ex. 8)). Dr. Balakrishnan even testified that, in his opinion, the “first tuner,” and “second tuner,” do not have to be the same “first tuner” and “second tuner” for each of the limitations of the asserted claims. *See* RX-0847C at Q/A 22 (citing to Balakrishnan Dep. Tr.). The effect of Dr. Balakrishnan’s opinion – that whichever tuner’s function is offered for cancelation can be the “second tuner,” – can be diagrammatically shown in RDX-1212 (JX-0006 at Fig. 2(b) (annotated)); RX-0847C at Q/A 22.

All of this has the impact of doubling the claim scope of the patent. And, in fact, Rovi’s expert agreed that under Rovi’s proposed

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construction, the claim could be read as “canceling a function of *the first tuner or second tuner*” or any tuner in an n-tuner system, instead of canceling only a “function of the second tuner.” RX-0847C (Bederson RWS) at Q/A 25 (citing to Balakrishnan Dep. Tr.); RDX-1213C (RX-0814 (Balakrishnan Dep., Ex. 9)) (marked by Rovi’s expert to acknowledge his agreement that this revised version of claim 1 accurately reflects his opinion regarding the scope of claim 1 of the ‘512 Patent); RX-0847C at Q/A 25 (citing to Balakrishnan Dep. Tr.); RDX-1216C (RX-0815 (Balakrishnan Dep., Ex. 10)) (marked by Rovi’s expert to acknowledge his agreement that this revised version of claim 1 accurately reflects his opinion regarding the scope of claim 1 of the ‘512 Patent)); *see also* Tr. 331:13-18 (acknowledging exhibit contained Dr. Balakrishnan’s initials to confirm testimony).

512-Claim 1		Actual Claim Language
<p><b>Claim 1</b>            1. A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising:            receiving a request to perform a tuning operation;            determining that either a first tuner or a second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and            in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.</p>	<p><b>Claim 1 Revised</b>            1. A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising:            receiving a request to perform a tuning operation;            determining that either a first tuner or a second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and            in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the first tuner or the second tuner to permit the first tuner or the second tuner to perform the requested tuning operation.</p>	<p>displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the <u>second tuner</u> to permit the <u>second tuner</u> to perform the requested tuning operation.</p>
		<p><b>Claim as Revised by Dr. Ravin Balakrishnan</b></p> <p>displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of <u>the first tuner or the second tuner</u> to permit <u>the first tuner or the second tuner</u> to perform the requested tuning operation.</p>

RDX-1214C, Balakrishnan Dep. Ex. 9;  
*see also* RDX-1216C, Ex. 10

And if rewriting the claim was not enough, Rovi’s proposed construction also attempts to recapture a claim that was canceled earlier in prosecution. The applicants for the ‘512 Patent attempted to obtain claims that would encompass canceling a function of any tuner to resolve a conflict. For example, original claim 56 provided the user the option of canceling “one of the prior requests” to “handle the current user request.” In short, original claim 56 covered canceling the function of the first tuner or the second tuner to resolve a tuner conflict. *See* RX-0847C at Q/A 27 (referencing RX-0195.0042 (File History for U.S. Pat. Appl. 11/154,065) (original claim 1), .0047-48 (original claim 35), .0051 (original claim 56)). It is clear the applicants knew the difference between canceling the function of “any tuner” as Rovi now proposes, and the second tuner, as claimed by the ‘512 Patent.

Resps. Br. at 174-178 (footnote omitted).

Rovi replies:

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Contrary to the parties' proposed constructions for the term "*a* second tuner" discussed above (where neither construction of "second tuner" is limited to the "last allocated tuner"), Respondents now contend that the term "*the* second tuner," in the claim phrase "cancel the function of *the second tuner* to permit *the second tuner* to perform the requested tuning operation," is limited to the "last allocated tuner." See Resps. Br. at 174. Respondents provide no basis for construing "*the* second tuner" in this phrase as "last allocated" while also agreeing that the term "*a* second tuner" standing alone simply refers to a tuner other than the "first tuner." Compls. Br. at 142 (further explaining Respondents' inconsistent arguments and setting forth authority that the same claim term should be constructed consistently throughout the patent—especially where, as here, the claim term "*the* second tuner" has an antecedent basis.").

Respondents argue that Rovi's construction is improper, because Rovi "treats [the] 'first tuner' and 'second tuner' as interchangeable" which has the "effect of doubling the scope of the asserted claims." Resps. Br. at 174-75. In claims 1 and 13, and consistent with the parties' constructions for "*a* second tuner," any tuner may be "*the* second tuner," so long as "*the* first tuner" and "*the* second tuner" refer to *different* tuners. Compls. Br. at 142-44.

In addition, binding Federal Circuit precedent holds that Rovi's construction is proper—"the use of the terms 'first' and 'second' [in a patent claim] is a common patent-law convention to distinguish between repeated instances of an element or limitation." *Id.* at 143 (quoting *3M Innovation Props.*); *see also id.* at 138 (same). Further, this same authority holds—just as Rovi proposes—that "first" and "second" in claim language is ordinarily understood to mean "instance A" and "instance B" of the same item. *Id.* Respondents' present no authority that would require—as Respondents' assert—that the "first tuner" be limited to the tuner used first in time and that the "second tuner" be limited to the tuner "last allocated" in time. Compls. Br. at 142-44; Resps. Br. at 174-77. There is no basis to import any temporal limitation. *Id.*

In support of its attempt to import a "last allocated" limitation into the claims, Respondents point to Figure 3(b) and argue that because, in this *example*, the tuner whose function is canceled happened to be the tuner that was used second in time, that the claims must necessarily and always be limited to canceling the function of the "last allocated" tuner. Resps. Br. at 175. Figure 3(b) is, however, merely an example of one way the invention could work when using the two-tuner configuration of Figure 2(b).

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Compls. Br. at 142-44; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (holding that it is improper to limit claims based on one exemplary embodiment). The example is illustrative, not limiting. JX-0006 ('512 Patent) at col. 2, lns. 45-48.

Additionally, Respondents contend that Rovi's construction—which as discussed previously uses “first” and “second” to refer to multiple instances of the same item (as in *3M Innovative Props.*)—is attempting to “recapture a claim [prosecution claim 56] that was canceled earlier in prosecution.” Resps. Br. at 177. Canceled prosecution claim 56, required, among many other limitations, “a plurality of tuners” and contained a requirement that the user be provided the option of canceling “one of the prior requests” to “handle the current user request.” RX-0195 (App. No. 11/154,065) at 42, 48, 51. There is no evidence demonstrating that the patentees' cancelation of claim 56 and inclusion of claims 1 and 13 limits claims 1 and 13 to only canceling the function of the “last allocated” tuner or that Rovi is impermissibly attempting to recapture disavowed claim scope by applying “first” and “second” in their ordinarily understood (and non-temporally limited) manner. Compls. Br. at 142-44.

Rovi Reply at 52-54 (footnote omitted).

The administrative law judge construes “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” to mean “stop a function utilizing a signal tuned to by the second tuner in order to permit the requested function utilizing a signal tuned to by the second tuner to be performed.”

Figures 4(b) and 4(c), reproduced below, depict program guide viewer options for cancelling a second tuner function:

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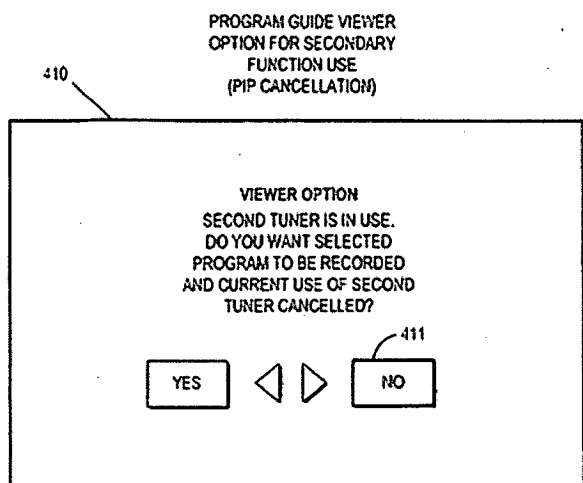


FIG. 4(b)

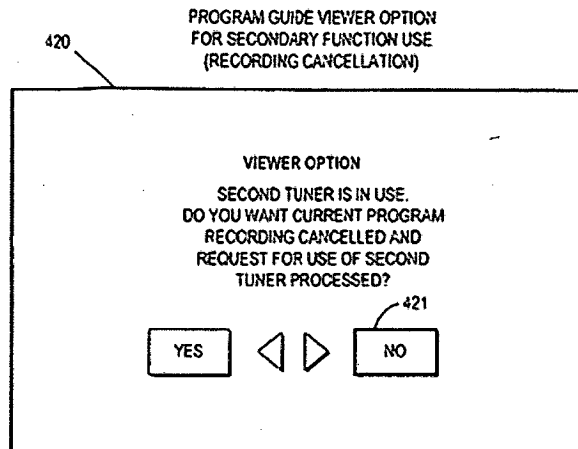


FIG. 4(c)

The specification explains:

FIG. 4(b) is an illustrative interactive television program guide viewer option selection screen for use in canceling a picture-in-picture function or other secondary user functions in accordance with the present invention. FIG. 4(c) is an illustrative interactive television program guide viewer option selection screen for use in the cancellation of a scheduled recording in accordance with the present invention.

JX-0006 at 2:60-67. In the summary of the invention, the specification explains about tuner allocation:

If the set-top box is equipped with multiple tuners, the interactive television program guide will allocate one of the tuners for recording, the program when it is time for the program to start. However, if all of the tuners are in use, which may be the case if the viewer is watching one program and using a picture-in-picture ("PIP") feature to view another program or to display additional text or graphics by using some other secondary tuner function feature that requires a tuner to operate, *the interactive television program guide may allocate a tuner for the recording function if the user indicates that he is no longer interested in using the PIP or another secondary tuner function or if the tuner allocation scheme dictates it do so.* Alternatively, if the set-top box is equipped with two tuners, one may be dedicated for television viewing and interactive television program guide user features, while the other tuner may be dedicated for recording use only.

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*Id.* at 1:65-2:13 (emphasis added).

Rovi's construction is consistent with the claim language, and is supported by the specification and figures, because it ties the action (cancelling the function) to the second tuner.

(6) *Tuning operation*

The term "tuning operation" only appears in the claims. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
performing an operation utilizing a tuned-to signal	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 139; Resps. Br. at 171-74.

Rovi's entire argument for this term follows:

One of ordinary skill in the art would have understood that the term "tuning operation" refers to the "tuning operation" requested by the user and means "performing an operation utilizing a tuned-to signal." CX-0003C (Balakrishnan WS) at Q/A 209. One of ordinary skill would have understood that the term "tuning operation" refers to operations that are performed on a tuned-to signal, not to the act of tuning to the signal. CX-0003C (Balakrishnan WS) at Q/A 209.

Rovi Br. at 139.

Comcast presents its arguments for this term along with the "tuner" term. The lone paragraph directed to "tuning operation" follows:

Consistent with these dictionaries, the term "tuning operation" should be given its plain and ordinary meaning as well. Rovi seeks to limit the meaning of "tuning operation" to "performing an operation utilizing a tuned-to signal" based on the usage of "tuning operation" in dependent claims 4 and 16, which recite tuning operations (*e.g.*, displaying, recording) the entail operations on the tuned to signal. But claims 4 and 16 depend from claims 1 and 13. These dependent claims contain *additional limitations* (*i.e.*, require particular "tuning operations" such as setting a recording) when compared to the independent claims from which they stem. See

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CX-0003C at Q/A 209. Rovi's argument, that usage in the dependent claim narrows usage in the independent claim, contradicts the basic law of claim construction. *Tr. of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1370 (Fed. Cir. 2016) (terms used in both independent claim and dependent claim are not restricted in scope by the additional limitations of the dependent claim). And Rovi also ignores that each of the "tuning operations" recited in these dependent claims, and throughout the specification, are consistent with Respondents' proposal. Each of these "tuning operations" requires selectively receiving RF signals in a desired frequency channel. Rovi's proposal eliminates this concept. This is also consistent with the purpose of the invention – the tuning conflict, as disclosed in the '512 Patent, and acknowledged by Rovi's expert, results when all the tuners are in use, and therefore cannot select the requested frequency. *See also id.* at 8:66-9:8; Tr. 290:15-25.

*See Resps. Br.* at 171-74.

Rovi replies:

Respondents argue that Rovi's construction for "tuning operation"—"performing an operation on a tuned-to signal"—is incorrect. *Resps. Br.* at 173-74. Contrary to Respondents' assertions, Rovi's construction is consistent with, but not limited to, the tuning operations listed in claims 4 and 16. *See id.*; *Compls. Br.* at 139. Specifically, Rovi's construction properly equates the claimed "tuning operation" with an operation that utilizes a "tuned-to signal," *e.g.*, viewing or recording television programming. *Id.* Simply tuning to a signal, as required by Respondents' construction, does not indicate whether that signal should be viewed and/or recorded, which as expressed by claims 4 and 16, is a requirement of a "tuning operation." *Id.*

Rovi Reply at 51.

Comcast replies:

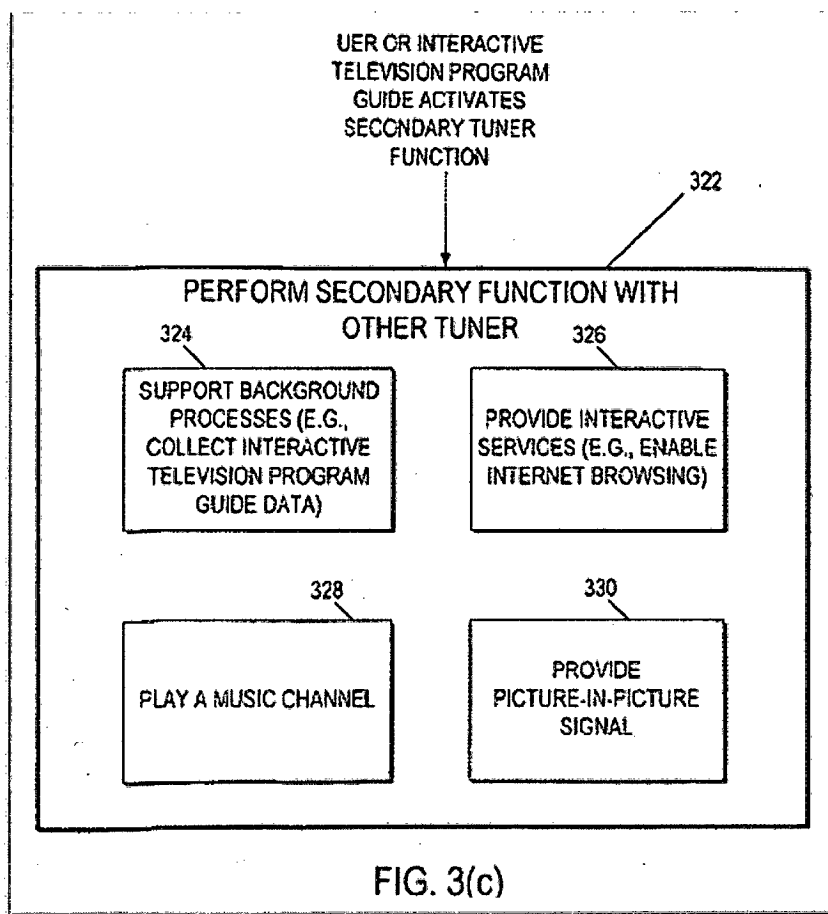
Rovi relies entirely on Dr. Balakrishnan's opinion that a "tuning operation" is separate from actually tuning to the particular program." *Compl. PoHB* at 139. And this opinion is actually consistent with Respondents' construction which requires performing an operation ("function performed by") that involves "tuning" ("selectively receiving RF signals in a desired frequency channel"). Rovi's construction, like its construction for "tuner,"

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attempts to avoid defining the actual function that constitutes “tuning.”

Resps. Reply at 59 (footnote omitted).

Claims 4 and 16 of the ‘512 patent explain that a tuning *function* includes at least “viewing television programming, recording television programming, and performing a secondary tuner function.” JX-0006 at 18:60-65; 20:14-19 (claiming “a tuning function selected from the group consisting of viewing television programming, recording television programming, and performing a secondary tuner function.” (emphasis added)). Figure 3(c), reproduced below, depicts secondary tuner functions:



Apart from the claims, the specification uses the word “operation” just once:



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. . . In contrast to the set-top box embodiment shown in FIG. 5, where set-top box output 508 is directed to VCR 114 and full interactive television program guide use is not possible while in the watch and record mode, this single-tuner RF-bypass-switch embodiment does not interfere with the functionality of the interactive television program guide when VCR 114 recording function is in *operation* because set-top box tuner output 508 is directed to television 116 and not VCR 114.

JX-0006 at 13:33-42 (emphasis added). This excerpt indicates that “operation” is the act of executing a function.

The administrative law judge construes “tuning operation” to mean “performing an operation utilizing a selected signal.” Rovi’s construction, which requires “utilizing,” generally comports with the claims and specification.

(7) *Neither a/the first tuner nor a/the second tuner are available to perform the requested tuning operation”*

The phrase “available to perform the requested tuning operation” appears only in claims 1 and 13. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
“neither a/the first tuner nor the second tuner are available to perform the requested tuning operation” has its plain and ordinary meaning where the plain and ordinary meaning is “the first and second tuners cannot perform the requested tuning operation.”	“In this condition, consistent with Respondents’ proposed construction, all the ‘tuners capable of performing the requested operation are in use.’”

See Rovi Br. at 139; Resps. Br. at 178.

Rovi’s entire argument for this term follows:

One of ordinary skill would have understood the phrase “neither a/the first tuner nor the second tuner are available to perform the requested tuning operation” to have its plain and ordinary meaning—“the first and second tuners cannot perform the requested tuning operation.” That is, the tuners are not available or

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capable of performing the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 216-17.

Respondents contend that this term does not need to be construed; however, should construction be deemed necessary, they contend that it should be construed as—“all tuners capable of performing the requested operation are in use.” Respondents’ construction is problematic for two reasons. First, it improperly equates the “first” and “second” tuners with “all tuners,” which may—under the plain meaning of the claims—be more than just two tuners. Second, it improperly equates “unavailable” with “in use” (and the requirement that “all tuners” be “in use”). CX-0003C (Balakrishnan WS) at Q/A 218. Just because a tuner is “unavailable” does not mean that it has to be “in use”—a tuner could be unavailable, for example, if it is disabled or reserved for a purpose other than “use” to view or record television programming. Nothing in the intrinsic record of the patent restricts or limits the “availability” of a tuner to whether or not that tuner is “in use.”

In the context of the infringement dispute whether or not a tuner is (and whether or not “all tuners” are) “in use” or not is relevant because—and as will be explained in more detail below—the accused products limit the number of simultaneous recordings not based on the number of tuners (and whether they are “all” in use or not) but based on how many streams of data the cable card can decrypt. Thus, and for example, an accused product may have eight tuners, but only five of those tuners are available and capable of presenting television to the user because the cable card limits how many tuners can be utilized simultaneously. Balakrishnan Tr. 360-61; RX-0846C (Garcia RWS) at Q/A 25-26; Garcia Tr. 627.

Rovi Br. at 139-40 (footnote omitted).

Comcast argues:

The entire concept of the ‘512 Patent is to detect conflicts when all tuners are occupied in a multi-tuner system. *See e.g.* JX-0006 (‘512 Patent) at 1:65-2:13; *see also* RDX-1218 (JX-0006 at Figs. 4(b) and 4(c) (annotated)) (demonstrating that the ‘512 Patent clearly discloses that the user has the option to cancel a program when the “second tuner is in use”). A conflict can only arise when it implicates the “nth” (last allocated tuner). *See supra* § IX.C.2.e. In this condition, consistent with Respondents’ proposed construction, all the “tuners capable of performing the requested operation are in use.”

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The '512 Patent clearly discloses a system in which a conflict is determined anytime all of the tuners are occupied – regardless of the manner in which they are occupied. *See* RDX-1240 (JX-0006 at Fig. 3(b) (annotated)). In Fig. 3(b) the tuner is occupied if it is displaying a television program, recording a program, or providing a secondary function (e.g., picture-in-picture or providing program listings data.) RX-0847C (Bederson RWS) at Q/A33; *See also* RX-0053 ('487 Prov. App.) at 1 ("In the case of multiple internal tuners in the settop, ... If the viewer is currently using both tuners (for example, for picture-in-picture) that activity will need to be interrupted"). In addition, the claims of the '512 Patent themselves indicate that an alert occurs any time the tuners are occupied, regardless of the service being delivered. For example, claims 8 and 9 of the '512 Patent make clear that a conflict is determined, and an alert is provided, when the user is viewing a program using one tuner and recording a program using the other viewer. JX-0006 at Cls. 8 and 9; RX-0847C at Q/A 36. And claims 4 and 16 clearly state a "tuning operation" include "viewing television programming." JX-0006 at Cls. 4, 8, 9 and 16.

In contrast to Respondent's proposal, Rovi's proposal is inconsistent with the purpose of the patent, and even Dr. Balakrishnan's own testimony, which agrees that, "determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation" would not be satisfied until the last tuner (the 100<sup>th</sup> tuner in a 100 tuner) was occupied. Tr. 329:23-330:15 (confirming deposition testimony); RX-0847C at Q/A 37, 26. Rovi's proposed construction that "the first and second tuners *cannot perform* the requested tuning operation" conflates lack of availability due to use (as the patent describes), with inability. *Id.* This has the effect of sweeping into the claims *any* scenario where the tuner "cannot perform" the requested operation, including cases when the tuner "cannot perform" the operation due to factors wholly unrelated to tuner conflicts; an error in the controller, incoming RF signal to be selected by the tuner, and numerous other hardware failures could leave the tuner so it "cannot perform the operation." Those scenarios cannot fairly be swept into the claims. And, of course, Rovi's proposal is redundant of the second half of the limitation requiring "wherein the first tuner and the second tuner are both capable of performing the tuning operation," which already addresses the capability (*i.e.*, whether the tuner can perform the operation). *Id.*

Resps. Br. at 178-79.

Rovi replies:

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Respondents proposed construction exceeds the plain meaning of the claim language. Resps. Br. at 178. All that the language requires is what Rovi proposes—“the first and second tuners cannot perform the requested tuning operation.” Compls. Br. at 139. Respondents assert the proper construction of this term requires reading-in limitations that equates no first or second tuner being “available” with “all tuners” needing to be “in use” at the same time. Resps. Br. at 178. As Rovi explained, Respondents’ incorrectly “equate[] the ‘first’ and ‘second’ tuners with ‘all tuners’” and further incorrectly “equate[] ‘unavailable’ with ‘in use.’” Compls. Br. at 140 (Rovi explaining further that a tuner can be “unavailable” for reasons other than it being “in use”); *id.* at 161-163 (Rovi explaining how the Accused Products infringe this limitation). No intrinsic source of meaning compels reading-in Respondents’ claim additions, and Rovi’s plain meaning construction, which requires that “the first and second tuners cannot perform the requested tuning operation”—*i.e.* that they are “unavailable” to perform the “requested tuning operation”—should be adopted. *See id.*

Rovi Reply at 51-52.

Comcast replies:

Rovi’s criticisms of Respondents’ constructions are inconsistent with its own statements, and those of its expert. Rovi summarizes the purpose of the ‘512 Patent as addressing “[a] tuner conflict [that] occurs when **no tuner is available** to perform a user’s request to perform a tuning operation.” Compl. PoHB at 133 (emphasis added). This purpose of the patent described by Rovi—in which “no tuner is available”—is logically coincident with “all tuners” being in use as recited in Respondents’ construction.

In contrast, Rovi’s proposed construction would lead to the absurd result that in, *e.g.*, a three tuner system, if two tuners are busy, and one tuner is free, this limitation would still be satisfied. *See* Tr. 299:16-301:1 (testifying that limitation would still be met when 3 out of 5 tuners were idle and not in use). If one tuner is free, how can there be “no tuner available,” as Rovi contends is the purpose of the invention? Dr. Balarkishnan’s [*sic*] provides similarly inconsistent opinions—on one hand admitting that tuner conflicts occur when no tuner is available, and on the other testifying that this limitation would still be met when there are free/unused tuners. *Compare* Tr. 289:16-290:25 (testifying that purpose of the invention is to provide an alert when both of the tuners in a two

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tuner system are in use) *with* Tr. 299:16-300:1; *see also* RX-0847C at Q/A 37.

Rovi attempts to rehabilitate its inconsistent positions, as discussed above, by arguing that just because a tuner is “not available” (as recited in the claim) does not require that it be “in use” (as recited in Respondents’ construction). Dr. Balakrishnan states that “a tuner that is ‘in use’ could still be ‘available’ depending on how a system is set up.” Compl. PoHB at 140. But, he provides no evidence in the intrinsic or extrinsic record to support his opinion, and interestingly, provides no description of any system in which a tuner “in use” could be still available. CX-0003C at Q/A 218.

The effect of Rovi’s proposal, and Dr. Balakrishnan’s opinion, is that the claims of the ‘512 Patent would read on “rules,” rather than actual tuner conflicts. For example, if there are ten tuners capable of displaying up to ten programs, and a *rule* is set to allow a viewer to watch only two premium channels (*e.g.*, HBO, Showtime) at one time, this would imply that ten tuners are available when ten non-premium channels are watched, and only two tuners are available when premium channels are watched. But the patent does not teach this. Rather, the patent clearly teaches that a first tuner may be occupied by, *e.g.*, displaying or recording a program (RX-0847C at Q/A 26; RDX-1237 (JX-0006 at Fig. 3(b) (annotated); JX-0006 (‘512 Patent) at 8:17-32), subsequently, the “other tuner,” or “second tuner” in a two tuner system, becomes occupied by either displaying or recording a second program, (RX-0847C at Q/A 26; RDX-1238 (JX-0006 at Fig 3(b) (annotated)); JX-0006 at 8:33-65, 9:44-59), and the IPG only issues an alert when a third operation is requested (RX-0847C at Q/A 26; RDX-1239 (JX-0006 at Fig 3(b) (annotated)); JX-0006 at 9:9-36, 9:44-59). The alert cannot be issued until the Nth, or last, tuner is occupied. RX-0847C at Q/A 32-38. Yet, through its construction, Rovi seeks to expand the claims beyond purpose of the invention—“tuner conflicts”—and expand it to any limit imposed on the number of channels that can be watched or recorded.

Resps. Reply at 54-55.

As an initial matter, the administrative law judge has determined that this phrase does not need construction. The words in the claim are used according to their common, plain meaning.

In the alternative, the administrative law judge construes the phrases “neither a first tuner nor a second tuner are available to perform the requested tuning operation” (claim 1) and

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“neither the first tuner nor the second tuner are available to perform the requested tuning operation” (claim 13) to mean “the first and second tuners cannot perform the requested tuning operation.” Rovi’s construction comports with the plain and ordinary meaning of the words in the claim.

Comcast’s construction requires that “all tuners capable of performing the requested operation are in use[.]” Comcast’s construction does not have support in the specification. *See Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (“a sound claim construction need not always purge every shred of ambiguity”); *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“Claims are often drafted using terminology that is not as precise or specific as it might be. . . . That does not mean, however, that a court, under the rubric of claim construction, may give a claim whatever additional precision or specificity is necessary to facilitate a comparison between the claim and the accused product. Rather, after the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact.”).

(8) *Resolving a conflict when multiple operations are performed using multiple tuners*

The phrase “resolving a conflict when multiple operations are performed using multiple tuners” only appears in the preambles of claims 1 and 13.<sup>145</sup> The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
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<sup>145</sup> The patent uses the word “conflict” four times—twice in the claims, once in describing Figure 4(b), and once in describing Figure 4(c). With regard to Figures 4(b) and 4(c), the patent proposes providing a screen “which acts to alert the viewer to a conflict in tuner allocation and usage.” JX-0006 at 10:27-28; 10:48-49.

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<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
Determining how to allocate a tuner to perform a requested operation if no tuner is available to perform the requested tuning operation	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 141; Resps. Br. at 184-85.

Rovi's entire opening argument is:

One of ordinary skill in the art would have understood the phrase "resolving a conflict when multiple operations are performed using multiple tuners" to mean "determining how to allocate a tuner to perform a requested operation if no tuner is available to perform the requested tuning operation." CX-0003C (Balakrishnan WS) at Q/A 219. Respondents contend that this phrase means "Determining how to allocate a tuner to perform a requested operation if all tuners are in use." As with the prior term, and for similar reasons, Respondents' construction improperly adds the words, "all tuners are in use" with no basis in the intrinsic record. CX-0003C (Balakrishnan WS) at Q/A 220.

Rovi Br. at 141.

Comcast's argument is:

As discussed above in §§ IX.C.2.a-d, and detailed in Fig. 3(b), the '512 Patent is directed to the goal of resolving conflicts in a system with multiple tuners (*i.e.*, *n* tuners). Such a conflict arises when all of the tuners, including the last allocated tuner – *i.e.*, the *n*th tuner – are occupied and a new request is received by the IPG. JX-0006 (the '512 Patent) at 1:65-2:13 (emphasis added); *see also id.* at 9:44-59 ("...Thus following step 308, both tuners are in use..."); 8:66-9:8 ("... Thus following step 309, both tuners are in use..."). Respondents' construction, as for the term "neither a/the first tuner nor the second tuner are available to perform the requested tuning operation," is consistent with the purpose of the invention and the intrinsic record.

Resps. Br. at 184-85.

Rovi replies:

Respondents do not separately address Rovi's construction for the phrase "resolving a conflict when multiple operations are

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performed using multiple tuners.” Instead, Respondents repeat the arguments that they made in support of their construction of the phrase “neither a/the first tuner nor the second tuner are available to perform the requested tuning operation,” which, as Rovi discussed *supra* at Section VII(A)(6), is incorrect. For the reasons established in Rovi’s Post-Hearing Brief (Compls. Br. at 141), the ALJ should adopt Rovi’s proposed construction.

Rovi Reply at 52.

In a footnote directed toward the “neither a/the first tuner nor a/the second tuner are available to perform the requested tuning operation” phrase, Comcast adds:

The parties’ dispute over “resolving a conflict when multiple operations are performed using multiple tuners” is fully reflected in this claim term. The central dispute is whether the claim term extends to the scenario when the tuning operation “cannot be performed” as recited in Rovi’s construction for “neither a/the first tuner nor a/the second tuner ...” or Respondents’ construction which recites that “all the tuners are in use.”

Resps. Reply at 54 n.20.

The parties agree that the construction should begin with “determining how to allocate a tuner to perform a requested operation if . . . [.]” but they differ on whether the subsequent condition should be that “no tuner is available to perform the requested tuning operation” (Rovi) or that “all tuners are in use” (Comcast). There is no substantive difference between Rovi and Comcast’s constructions. *See also* CX-0003C at Q/A 220-22 (conceding similarities and stating opinions do not change under either party’s construction).

Accordingly, the administrative law judge construes the phrase “resolving a conflict when multiple operations are performed using multiple tuners” to mean “determining how to allocate a tuner to perform a requested operation if no tuner is available to perform the requested tuning operation.”



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### (9) *Interactive television program guide*

The term “interactive television program guide” appears in claims 1, 10, 13, and 22 and throughout the specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
software that, among other things, allows a user to navigate to and select program listings	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 145; Resps. Br. at 181-82.

Rovi’s entire argument for this term follows:

The term “interactive television program guide” means “software that, among other things, allows a user to navigate to and select program listings.” CX-0003C (Balakrishnan WS) at Q/A 236-237.

Rovi Br. at 145.

Comcast’s entire argument for the terms “interactive television program guide,” “interactive television program guide implemented on the system” and “system” follows:

The ‘512 Patent is clearly about the use of an IPG resident on “user television equipment” that provides the user the ability to view television programs and set recordings using a VCR. RX-0847C (Bederson RWS) at Q/A 48; JX-0006 (‘512 Patent) at 1:55-64, 1:22-34 (“...[w]hen the selected program begins, the program guide tunes the set-top box to the channel showing the program and directs a videocassette recorder (“VCR”) to begin recording...”), 1:48-51 (“It is therefore an object of the present invention to provide an interactive television program guide system which allows a user to record one program while simultaneously watching another program.”). The ‘512 Patent also proposes that each user has a user guide equipment that acts as a receiver, such as a STB. JX-0006 at 4:54-5:7 (“Each user has user program guide equipment that acts as a receiver. The user program guide equipment is typically a set-top box such as set-top box 112....”). As is shown clearly in Fig 2(a) of the ‘512 Patent, a POSITA would understand that the STB hosts the program guide and provides “program guide command signals.” RDX-1243 (JX-0006 at Fig 2(b) (annotated)) (highlighting the STB (112) with two tuners); RX-0847C at Q/A 49. In addition, the STB provides

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further commands, via the infrared transmitter to other equipment (e.g. a video cassette recorder). See JX-0006 at 6:65-7:7 (“The interactive television program guide command signals on line 212 that are provided to IR transmitter 200 allow channel selection requests and VCR start and record commands to be sent from the interactive television program guide in set-top box 112 to VCR 114...”), Fig 2(b) (element 200).

Resps. Br. at 181-82.

Rovi replies:

Respondents address this term together with the term “system” and therefore do not separately address either side’s construction for “interactive television program guide.” Resps. Br. at 181-82. For the same reasons set forth in Compls. Br. at 144-45, Rovi’s construction is correct.

Rovi Reply at 54-55.

Comcast, with a focus on claim 13 and its means-plus-function argument directed toward another claim phrase, replies:

Rovi misstates *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). See Compl. PoHB at 182-183. The lack of the term “means” does not create a strong presumption that § 112(6) does not apply, as Rovi contends. *Id.* at 182, n. 24. Rather *Williamson* holds exactly the *opposite* - that the presumption that § 112(6) does not apply to a patent claim that does not use the word “means” **is not strong**. See *Williamson*, 792 F.3d at 1349 (“Our consideration of this case has led us to conclude that such a heightened burden is unjustified and that **we should abandon characterizing as “strong” the presumption** that a limitation lacking the word “means” is not subject to § 112, para. 6.”) (emphasis added).

And though claim 13 admittedly lacks the specific term “means,” the entirety of the claim limitation—“an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to”—recites function, without structure, which amounts to impermissible functional claiming. The cure for functional claims is means-plus-function treatment. And the only structure for an “interactive television program guide implemented on the system . . .” referenced in the ‘512 is set top box 112 with a processor, or other suitable

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equipment with similar circuitry, at the user's premises.  
RX-0847C at Q/A 46-50.

Resps. Reply at 58-59.

The administrative law judge construes “interactive television program guide” to mean “software that, among other things, allows a user to navigate to and select program listings.”

As an initial matter, there is little substantive difference between the parties' constructions. *See also* CX-0003C at Q/A 238 (noting similarity between constructions). For example, both parties argue that the interactive television program guide connotes software. Further, Rovi's construction does not foreclose functionality appearing in the dependent claims, such that functions like cancelling a function, collecting program guide data, browsing the Internet, or playing a music channel would not be excluded under a different construction. *See* JX-0006 at 18:54-59 (claim 3); 18:66-19:3 (claim 5).

### (10) *Direct the interactive television program guide*

The phrase “direct the interactive television program guide” appears in claims 1, 9, 13, and 21 and once in the specification. The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
“direct the interactive television program guide” has its plain and ordinary meaning, where the plain and ordinary meaning is “control the operations of the interactive television program guide to stop a function utilizing a signal tuned to by a tuner”	“cause the interactive [ <i>sic</i> ] to command termination of a function that is already being performed.”

*See* Rovi Br. at 141; Resps. Br. at 183.

Rovi's entire opening argument for this term is:

One of ordinary skill in the art would have understood the phrase “direct the interactive television program guide” to have its plain and ordinary meaning—“control the operations of the interactive

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television program guide to stop a function utilizing a signal tuned to by a tuner.” CX-0003C (Balakrishnan WS) at Q/A 225.

Rovi Br. at 141.

Comcast entire argument for this term is:

As discussed above in §§ IX.C.2.e-d, the ‘512 Patent details that the program guide controls the operation of the tuners. This basic logic supports Respondents’ construction, that “direct[ing] the interactive television program guide to cancel a function” is to “cause the interactive to command termination of a function *that is already being performed.*” And as shown by the claim language, the program guide is directed to cancel the function after the user makes a selection to resolve the conflict. JX-0006 (‘512 Patent) at claim 1 (“provides a user with an opportunity to ***direct the interactive television program guide to cancel a function of the second tuner*** to permit the second tuner to perform the requested tuning operation”) (emphasis added).

Similarly, as shown in Fig. 3(b), the user can choose to cancel the function of the second tuner. RDX-1239 (JX-0006 at Fig. 3(b) (e.g., element 316)); *see also* RDX-1218 (JX-0006 at Figs. 4(b) and 4(c) (annotated)) (showing conflict alert screens when the second tuner of a two tuner system is in use). If the user chooses to cancel the function, the IPG cancels the function that is currently supported by the tuner. *See id.* at Fig 3(b) (element 320, “program guide sends IR commands to stop recording process”).

Resps. Br. at 183-84.

Rovi replies:

Respondents do not separately address this phrase in their Brief, but instead address its construction as part of the phrase “cancel the function of the second tuner” discussed below. For the reasons established in Rovi’s Post-Hearing Brief (Compls. Br. at 141), the ALJ should adopt Rovi’s proposed construction of this phrase.

Rovi Reply at 52.

The parties have separately requested that the administrative law judge construe the entire phrase “direct the interactive television program guide to cancel a function.” The parties’ proposed constructions for the sub-phrase “direct the interactive television program guide” are

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actually directed toward the entire phrase. The administrative law judge has determined it is not necessary to construe the sub-phrase when the parties have not proposed separate constructions for the sub-phrase. *Cf. Sulzer Textil, O2 Micro, Biotec Biologische Naturverpackungen*, and *U.S. Surgical Corp.*

(11) *Cancel a function*

The phrase “cancel a function” appears throughout the claims and specification. The parties have proposed the following constructions:

Rovi’s Proposed Construction	Comcast’s Proposed Construction
stop a function utilizing a signal tuned to by a tuner	termination of a function that is already being performed

*See* Rovi Br. at 144; Resps. Br. at 174-78, 183 (“This basic logic supports Respondents’ construction, that ‘direct[ing] the interactive television program guide to *cancel a function*’ is to ‘cause the interactive to command *termination of a function that is already being performed.*’” (emphasis added)).

Rovi’s entire argument for this term follows:

The phrase “cancel a function” contains the same terms addressed above with respect to the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation.” Thus, the understanding of one of ordinary skill in the art would be the same as discussed with respect to that phrase. CX-0003C (Balakrishnan WS) at Q/A 231.

Rovi Br. at 144.

Comcast presents its arguments for this term along with the “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” phrase. *See* Resps. Br. at 174-78.

Rovi replies:

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Respondents do not separately address these phrases in their Brief, instead grouping their discussion with the term “cancel the function of the second tuner.” For the reasons established in Rovi’s Post-Hearing Brief (Compls. Br. at 144-145), the ALJ should adopt Rovi’s proposed construction of these phrases.

Rovi Reply at 54.

Comcast presents its reply for this term along with the “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” phrase. *See* Resps.

Reply at 56-58.

The administrative law judge previously construed the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” to mean “stop a function utilizing a signal tuned to by the second tuner in order to permit the requested function utilizing a signal tuned to by the second tuner to be performed.”

Thus, the administrative law judge construes the phrase “cancel a function” to mean “stop a function utilizing a signal tuned to by a tuner.”

(12) *Direct the interactive television program guide to cancel a function*

The phrase “direct the interactive television program guide to cancel a function” appears in claims 1, 9, 13, and 21. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
“direct the interactive television program guide” has its plain and ordinary meaning, where the plain and ordinary meaning is “control the operations of the interactive television program guide to stop a function utilizing a signal tuned to by a tuner”	“cause the interactive [ <i>sic</i> ] to command termination of a function that is already being performed.”

*See* Rovi Br. at 141; Resps. Br. at 183.

Rovi’s entire argument for this term follows:

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One of ordinary skill in the art would have understood the phrase “direct the interactive television program guide” to have its plain and ordinary meaning—“control the operations of the interactive television program guide to stop a function utilizing a signal tuned to by a tuner.” CX-0003C (Balakrishnan WS) at Q/A 225.

Rovi Br. at 141.

Comcast argues:

As discussed above in §§ IX.C.2.e-d, the ‘512 Patent details that the program guide controls the operation of the tuners. This basic logic supports Respondents’ construction, that “direct[ing] the interactive television program guide to cancel a function” is to “cause the interactive to command termination of a function *that is already being performed*.” And as shown by the claim language, the program guide is directed to cancel the function after the user makes a selection to resolve the conflict. JX-0006 (‘512 Patent) at claim 1 (“provides a user with an opportunity to ***direct the interactive television program guide to cancel a function of the second tuner*** to permit the second tuner to perform the requested tuning operation”) (emphasis added).

Similarly, as shown in Fig. 3(b), the user can choose to cancel the function of the second tuner. RDX-1239 (JX-0006 at Fig. 3(b) (e.g., element 316)); *see also* RDX-1218 (JX-0006 at Figs. 4(b) and 4(c) (annotated)) (showing conflict alert screens when the second tuner of a two tuner system is in use). If the user chooses to cancel the function, the IPG cancels the function that is currently supported by the tuner. *See id.* at Fig 3(b) (element 320, “program guide sends IR commands to stop recording process”).

Resps. Br. at 183-84.

Rovi replies:

Respondents do not separately address this phrase in their Brief, but instead address its construction as part of the phrase “cancel the function of the second tuner” discussed below. For the reasons established in Rovi’s Post-Hearing Brief (Compls. Br. at 141), the ALJ should adopt Rovi’s proposed construction of this phrase.

Rovi Reply at 52.

Comcast’s reply does not address this phrase. *See generally* Resps. Reply at 50-59.

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The administrative law judge previously construed the phrase “cancel a function” to mean “stop a function utilizing a signal tuned to by a tuner.” After excluding this sub-phrase, the parties’ disagreement reduces to the meaning of the word “direct.” Rovi proposes that “direct” means “control” while Comcast proposes that “direct” means “cause.” There is little substantive difference between these words, and the parties do not address them individually. Either “control” or “cause” are acceptable constructions.

Thus, the administrative law judge construes the phrase “direct the interactive television program guide to cancel a function” to mean “control or cause the operations of the interactive television program guide to stop a function utilizing a signal tuned to by a tuner.”

### *(13) Function of the second tuner*

The phrase “function of the second tuner” appears only in the claims. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
a function utilizing the signal tuned to by the second tuner	Comcast does not clearly present a construction in its post-hearing brief.

*See* Rovi Br. at 145; Resps. Br. at 174-78.

Rovi’s entire argument for this phrase follows:

The phrase “function of the second tuner” contains the same terms addressed above with respect to the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation.” Thus, the understanding of one of ordinary skill in the art would be the same for both phrases. CX-0003C (Balakrishnan WS) at Q/A 231.

Rovi Br. at 145.



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Comcast presents its arguments for this phrase along with the phrases “cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation” and “cancel a function” phrase. *See* Resps. Br. at 174-78.

Comcast presents its reply for this term along with the “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” phrase. *See* Resps. Reply at 56-58.

The administrative law judge previously construed the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation” to mean “stop a function utilizing a signal tuned to by the second tuner in order to permit the requested function utilizing a signal tuned to by the second tuner to be performed.”

Thus, the administrative law judge construes the term “function of the second tuner” to mean “a function utilizing the signal tuned to by the second tuner.”

(14) *Interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive . . . ; determine . . . ; and in response to the determination, display . . .*

The phrase “interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive . . . ; determine . . . ; and in response to the determination, display . . .” appears only in claim 13.

The full text of the disputed phrase appears in bold, italicized text:

13. A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising:

a first tuner;

a second tuner; and

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*an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to:*

*receive a request to perform a tuning operation;*

*determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and*

*in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.*

JX-0006 at 19:41-59.

The parties have proposed the following:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
No construction necessary. Individual terms construed elsewhere.	This is a means-plus-function limitation.

See Rovi Br. at 146; Resps. Br. at 179. Comcast identifies the following functions:

- (1) "receive a request . . . ;"
- (2) "determine that neither the first tuner nor the second tuner are available . . . ;" and
- (3) "in response to the determination, display an alert . . ."

Resps. Br. at 180.<sup>146</sup> Comcast identifies the following structure, as follows:

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<sup>146</sup> The full text is:

- (1) "receive a request to perform a tuning operation"
- (2) "determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation"

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The only structure relevant to performing the above identified functions is a processor on user equipment, such as a “set top box,” or a “set top box, advanced television receiver with a microprocessor and memory, a personal computer with or without one or more tuners, a satellite receiver, a high definition television (“HDTV”) receiver, or any other suitable television reception and data processing device.”

*Id.*

Rovi’s entire opening argument for this term follows:

No construction is necessary for this claim phrase because the term “interactive television program guide” and each of the functions that follow are construed elsewhere. CX-0003C (Balakrishnan WS) at Q/A 239. Respondents contend that this phrase should be construed as a means-plus-function limitation under § 112, para. 6. Respondents are incorrect for the reasons established in Section VI(K)(1), *infra*.

Rovi Br. at 147. In Section VI(K)(1), Rovi argues that claim 13 is not indefinite, as follows:

Respondents contend that the phrase “interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive . . . ; determine . . . ; and in response to the determination, display . . .” should be construed as a means-plus-function limitation under 35 U.S.C. § 112(6). But § 112(6) is inapplicable to claim 13, because claim 13 does not use the word “means” and Respondents admit that the claimed “interactive television program guide” is a definite structure. Respondents construe the term “interactive television program guide,” in claims 1 and 13 to have a definite structure: “application that, when executed, causes television program listings to be presented to the user and enables the user to navigate through the program listings, to select an individual listing, and to select a function associated with the selected listing.” CX-0003C (Balakrishnan WS) at Q/A 238, 240; CDX-0502 (Proposed Constructions); RX-0004C (Bederson WS) at Q/A 49 (opining that

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(3) “in response to the determination, display an alert that in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation”

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Respondents' constructions are consistent with the understanding of a person of ordinary skill).

Respondents also contends that claim 13 is indefinite for reciting both method and apparatus limitations. RX-0004C (Bederson WS) at Q/A 63. Claim 13, a system claim, does not recite any method claim limitations, *i.e.*, there is no requirement that a method step be performed in order for claim 13 to be infringed. CX-1902C (Balakrishnan RWS) at Q/A 93. Instead, the claims only require that the interactive television program guide (a structure) be "operative to" perform certain functions, *not* that those functions actually be performed. *Id.* In a similar case, the Federal Circuit held that the term "capable of," when describing a processor, was insufficient to render an apparatus claim indefinite. *Microprocessor Enhancement Corp. v. Tex. Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008).

Rovi Br. at 182-183 (footnote omitted).

Comcast argues:

Claim 13 of the '512 Patent recites "an interactive television program guide implemented on the system, wherein the interactive program guide is operative to: ..." The term "operative to" is a nonce word and this element of claim 13 should be treated as a means-plus-function element and subject to 35 U.S.C. 112(6). *See Verint Systems Inc. v. Red Box Recorders Ltd.*, 166 F.Supp.3d 364, 379-383 (S.D.N.Y. Jan. 4, 2016) (holding that claims using "operative" language were subject to analysis as means-plus-function elements). Similarly, a POSITA would understand the term "operative to" to serve a similar purpose to the term "means" in a traditional means-plus-function term. RX-0004C (Bederson WS) at Q/A63. Here, the limitation recites three functions: (1) "receive a request . . . ;" (2) "determine that neither the first tuner nor the second tuner are available . . . ;" and (3) "in response to the determination, display an alert . . . [.]". The only structure relevant to performing the above identified functions is a processor on user equipment, such as a "set top box," or a "set top box, advanced television receiver with a microprocessor and memory, a personal computer with or without one or more tuners, a satellite receiver, a high definition television ("HDTV") receiver, or any other suitable television reception and data processing device." RX-0004C at Q/A 67-69; JX-0006 at 4:54-5:7 ("[e]ach set-top box 112 preferably contains a processor to handle tasks associated with implementing a[n] interactive television program guide application on the set-top box"); 5:20-44; ); RX-0847C at Q/A 48.

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Rovi argues that means-plus-function treatment should not apply, because the term “means” is not explicitly recited. But this is contrary to modern Federal Circuit Law, which has removed the strong presumption against means-plus-function treatment, and made clear that “when a claim term lacks the word “means,” the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites “function without reciting sufficient structure for performing that function.” *Williamson*, 792 F.3d at 1349-50. Claim 13 executes exactly the type of functional claiming that has been prohibited by the Federal Circuit; “implemented on the system,” provides no actual structure. While Rovi argues that the “interactive television program guide” addresses this issue, this sidesteps the issue. This claim does not recite “an interactive television program guide” that performs functions; in that case, it would purely be software, and would be subject to structural limitations, because that software must run on some hardware. Rather, the claim recites “an interactive television program guide implemented on the system” to perform numerous functions; without a definite structure for “the system,” the claim engages in the prohibited functional claiming. Rovi’s proposed construction – “an integrated assemblage of hardware and/or software elements operating together to accomplish a prescribed end purpose” – underscores the point, by essentially construing the term as hardware and software that performs the function. This is exactly what the Federal Circuit’s opinion on functional claiming seeks to avoid, and why application of § 112(6) is required.

Resps. Br. at 179-181.

Rovi replies:

Respondents contend that, despite lacking the word “means,” this phrase is a means-plus-function term that falls under 35 U.S.C. § 112(6). Resps. Br. at 179-81. Respondents contend that the ALJ should treat claim 13 as a means-plus-function claim term solely because claim 13 uses the words “operative to,” which Respondents contend are “nonce” words. Resps. Br. at 179 (citing *Verint Systems Inc. v. Red Box Recorders Ltd.* 166 F. Supp. 3d 364, 379-83 (S.D.N.Y. 2016)). Respondents misrepresent the claim language at-issue in the *Verint Systems* case, which is materially (and importantly) different from the operative claim language at-issue here. In *Verint Systems*, the claim required a “computer application operative to . . . access . . . and construct . . .” *Id.* (emphasis added). The court held that this claim was subject to means-plus-function analysis, not because it used the term

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“operative to” or because “operative to” is a “nonce” word, but, rather, because the term “computer application” was generic and did not recite sufficiently definite structure. *Id.* at 379-80.

The *Virent Systems* case is inapplicable to claim 13 of the ‘512 Patent which recites “an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to” “receive,” “determine,” and “display an alert.” JX-0006 at claim 13. Unlike the “computer application” in *Virent Systems* which was entirely undefined and unbounded, an “interactive television program guide” is well-known and well-understood to those of ordinary skill in the art. Compls. Br. at 145; CX-0003C (Balakrishnan WS) at Q/A 236-38; RX-0847C (Bederson WS) at Q/A 48. And, for the means-plus-function construction rules to apply to claims that do not use the term “means,” Respondents *must* show that “the claim limitation is so devoid of structure that the drafter constructively engaged in means-plus-function claiming.” *Inventio AG v. Thyssentkrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1357 (Fed. Cir. 2011).

In an attempt to show that the claimed “interactive television program guide” lacks structure, Respondents contend that it is merely software and the “system” on which it is implemented is not a definite structure. Resps. Br. at 180. As a threshold, this is a new argument that Respondents did not make in their Pre-Hearing Brief (*see* Resps. P.H. Br. at 534- 35, 692) and therefore waived. G.R. 7. Regardless, it is indisputable that an “interactive television program guide” (and unlike the “computer application” in *Virent Systems*) is a specific type of application program, as defined by each party in their respective constructions for the ‘512 Patent (Compls. Br. at 145) and for other Asserted Patents that also use the phrase “interactive television program guide.” *See e.g. id.* at 42-47 (parties’ each proposing non-means-plus-function constructions for the term “interactive television program guide” and variants thereof in the context of the ‘801, ‘413, and ‘263 Patents). Indeed, and unlike the undefined “computer application” in *Virent Systems*, the “interactive television program guide” of the ‘512 Patent has a well understood meaning. JX-0006 (‘512 Patent) at col. 1, lns. 22-64. It is therefore of sufficiently definite structure to avoid means-plus-function analysis. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015); CX-1902C (Balakrishnan RWS) at Q/A 91.

Rovi Reply at 55-56.

Comcast replies:

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Rovi misstates *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). See Compl. PoHB at 182-183. The lack of the term “means” does not create a strong presumption that § 112(6) does not apply, as Rovi contends. *Id.* at 182, n. 24. Rather *Williamson* holds exactly the **opposite** - that the presumption that § 112(6) does not apply to a patent claim that does not use the word “means” **is not strong**. See *Williamson*, 792 F.3d at 1349 (“Our consideration of this case has led us to conclude that such a heightened burden is unjustified and that **we should abandon characterizing as “strong” the presumption** that a limitation lacking the word “means” is not subject to § 112, para. 6.”) (emphasis added).

And though claim 13 admittedly lacks the specific term “means,” the entirety of the claim limitation—“an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to”—recites function, without structure, which amounts to impermissible functional claiming. The cure for functional claims is means-plus-function treatment. And the only structure for an “interactive television program guide implemented on the system . . .” referenced in the ‘512 is set top box 112 with a processor, or other suitable equipment with similar circuitry, at the user’s premises. RX-0847C at Q/A 46-50.

Resps. Reply at 58-59.

The administrative law judge has determined that the disputed phrase is not a means-plus-function limitation. The administrative law judge has also determined that no construction for this phrase is necessary, as words within the phrase are construed elsewhere. Comcast has not offered any alternative argument apart from its means-plus-function argument.

As an initial matter, Comcast has been able to propose constructions for a host of terms and phrases contained within the claim language it contends invokes § 112, ¶ 6. In particular, Comcast has argued that an “interactive television program guide” is an application. See also CX-0003C (Balakrishnan WS) at Q/A 240. Additionally, in another section of its post-hearing brief, Comcast argued:

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The asserted claims of the ‘512 patent consist of “well-understood, routine, conventional activity,” and contain nothing to transform them to a patent eligible application. . . . To persons of ordinary skill in the art, the asserted claims are nothing more than implementation of the well-known concept of a “conditional execution’ statement” (*i.e.*, an “if statement”). RX-0004C at Q/A 20. And *there is little dispute among the parties’ experts that the claims were directed to well-known and standard software and hardware features* (multiple tuners were known). See Tr. 1175:1-12 (*interactive television program guides and receiving turning requests were known*); RX-0004C at Q/A 21 (alert upon detection of resource conflict was well-known). And in fact, *recent case law has even found these types of hardware conventional*. See *Tech. Dev. Lic., LLC v. General Instrument Corp.*, 2016 WL 7104253, \*6 (N.D. Ill., Dec. 6, 2016) (tuner, remote control, processor).

Resps. Br. at 205 (arguing the asserted claim is patent ineligible under § 101 (emphasis added)).

This argument, which Comcast supports with expert testimony and recent case law, shows that words of the claim would have been “understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” See *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-49 (Fed. Cir. 2015). Further, the evidence shows that the patent discloses known hardware, including set top boxes, advanced television receivers with microprocessors and memory, personal computers with or without one or more tuners, satellite receivers, and high definition television (“HDTV”) receivers. See JX-0006 at 1:21-34, 4:54-5:7, 5:20-44; RX-0004C (Bederson WS) at Q/A 67-69.

### (15) *Displaying/display*

The terms “displaying” and “display” appear in claims 1, 10, 13, and 22 and in the specification. The parties have proposed the following constructions:

Rovi’s Proposed Construction	Comcast’s Proposed Construction
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<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
<p>"displaying" means "outputting data that is capable of being shown on a display screen"</p> <p>"display" means "to output data that is capable of being shown on a display screen"</p>	<p>Comcast does not clearly present a construction in its post-hearing brief.</p>

See Rovi Br. at 147; Resps. Br. at 182-83.

Rovi's entire argument follows:

One of ordinary skill in the art, when reading the terms "display" and "displaying" in light of the claims, the specification, and the file history of the '512 Patent, would have understood the term "display" in claim 1 to mean "to output data that is capable of being shown on a display screen" and would have understood the term "displaying" in claim 10 to mean "outputting data that is capable of being shown on a display screen." CX-0003C (Balakrishnan WS) at Q/A 243. When independent claims 1 and 13 are read together with their dependent claims 10 and 22, respectively, one of ordinary skill in the art would have understood that "displaying" in claims 1, 10, and 22 and "display" in claim 13 refers to the output of data that is capable of being shown on a display screen. CX-0003C (Balakrishnan WS) at Q/A 244.

Rovi Br. at 147.

Comcast's argument follows:

This plain and ordinary meaning of "presenting/present visually on a screen" should be adopted. This meaning is consistent with the use of the term "display" as it appears in other phrases which require construction. In contrast, Rovi's construction is nothing but a transparent attempt to allow the asserted claims to read on devices that, by themselves, cannot display anything visually. Tr. 287:16-19 ("Q: The accused set-top boxes, we're talking about an apparatus, a little box, that box does not actually display anything; correct? It doesn't show anything? A: It doesn't have a screen.")[.] In fact, Dr. Balakrishnan's own testimony on cross examination renders Rovi's claim construction untenable. When questioned about the term "display" as it used in claim 1 (and not in a vacuum), Dr. Balakrishnan admitted that if the user could not visually see the alert, there would be no "opportunity to resolve the

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conflict,” as required by each of the asserted claims, Tr. 286:12-24[:]

Q. Now, for the purposes of claim 1, why don't we put up claim 1 in JX-6. It's a method for resolving conflict. And do you see there's a determination made and in response to it, you're displaying an alert that provides a user with an opportunity to direct the guide; right?

A. That is correct.

Q. Okay. And that purpose to allow the user an opportunity to cancel something is not met unless the user can actually see; correct?

A. For the opportunity to -- to cancel? Yeah, if I don't see the alert, then I wouldn't have the opportunity to cancel it.

Resps. Br. at 182-83.

Rovi replies:

The terms displaying/display, as used in claims 1 and 13, should be construed to mean “to output/outputting data that is capable of being shown on a display screen.” Compls. Br. at 147. Claims 10 and 22 depend from claims 1 and 13, respectively, and add the requirements of displaying the alerts on the display screen. *Id.*

Rovi Reply at 56-57.

Comcast replies:

Rovi fails to grapple with its expert's own testimony, and the plain language of claims 1 and 13, which require “display[ing] an alert that *provides a user with an opportunity to direct the interactive television program guide* to cancel a function of the second tuner.” Tr. 286:12-24. If the user cannot see the display, no such opportunity exists. *Id.*

Resps. Reply at 59 (emphasis in original).

The administrative law judge construes “displaying” to mean “presenting” and “display” to mean “present.”

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The claims require that the interactive television program guide is capable of “*displaying* an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation” (claim 1) and that it is able to “*display* an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation” (claim 13).

Rovi’s construction, when substituted into the claim 1, would read:

... the method comprising: ... [outputting data that is capable of being shown on a display screen] an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

See JX-0006 at 18:43-47.

In contrast, substituting the “presenting” construction, into the claim 1, would read:

... the method comprising: ... [presenting] an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

*Id.* The “presenting” and “present” constructions comport with how the terms are used in the context of the claims. Neither the claims nor the specification require that a set-top box alone visually display the alert (as Comcast suggests by arguing that “Rovi’s construction is nothing but a transparent attempt to allow the asserted claims to read on devices that, by themselves, cannot display anything visually.”). Indeed, the specification explains the display occurs on the television:

During use of the interactive television program guide implemented on set-top box 112, television program listings and other information *may be displayed on television 116*. Such interactive television program guide displays may be overlaid on top of a television program to which the user has tuned with set-top

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box 112 or may be displayed in place of such a program. Each set-top box 112, VCR 114, and television 116 may be controlled by one or more remote controls 118 or any other suitable user input interface such as a wireless keyboard, mouse, trackball, dedicated set of buttons, voice recognition system etc. Remote controls such as remote control 118 have various buttons that may be pressed by the user such as cursor keys (for on-screen movement of a highlighted region, scrolling functions, etc.), an enter key (for making a selection), channel number keys (for selecting functions related to user preferences), etc.

...

*Screen 410 may be displayed by the interactive television program guide on user television 116* when the second or “other” tuner chosen by the interactive television program guide to record the selected program is already in use performing a secondary function such as PIP and the first tuner is being used for viewing television 116.

JX-0006 at 5:20-35, 10:28-34. Thus, one of ordinary skill in the art would have understood that “presenting” something on a television screen includes outputting data necessary for the image.

### (16) System

The term “system” appears throughout in claims 13-24 and throughout the specification.

The parties have proposed the following constructions:

<b>Rovi's Proposed Construction</b>	<b>Comcast's Proposed Construction</b>
“system” has its plain and ordinary meaning, where the plain and ordinary meaning is “an integrated assemblage of hardware and/or software elements operating together to accomplish a prescribed end purpose”	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 148; Resps. Br. at 181-82.

Rovi's entire argument for this term follows:

The term “system” is used only in asserted claims 13 and 22. One of ordinary skill in the art would have understood the term “system” to have its plain and ordinary meaning of “an integrated

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assemblage of hardware and/or software elements operating together to accomplish a prescribed end purpose.” CX-0003C (Balakrishnan WS) at Q/A 255-56. The specification uses the term “system” to generally describe, among other things, the assemblage of elements in the Figures 1(a) and 2(a) of the ‘512 Patent, which includes both user equipment and non-user only equipment, such as head end equipment. JX-0006 (‘512 Patent) at col. 2, Ins. 27-30 and col. 2, Ins. 34-44; CX-0003C (Balakrishnan WS) at Q/A 256.

Respondents simultaneously contend that the term “system” needs no construction and that it should be construed as “user television equipment (devices designed for viewing or recording television programs, such as set-top boxes, televisions, and VCR’s).” Respondents’ construction is incorrect because there is no plain and ordinary meaning for “system” that is *limited* solely to user television equipment. CX-0003C (Balakrishnan WS) at Q/A 259. And, as discussed with respect to the next term, this dispute is relevant to infringement because Respondents contend—incorrectly and in contravention to the embodiments of Figs. 1(a) and 2(a)—that the “interactive television program guide” must be implemented solely on “the system” which they define as limited solely to “user television equipment” (which in turn is located solely in a user’s home).

Rovi Br. at 148-49 (footnote omitted).

Comcast presents its arguments for “system,” “interactive television program guide,” “interactive television program guide implemented on the system” together. The entire combined argument follows:

The ‘512 patent is clearly about the use of an IPG resident on “user television equipment” that provides the user the ability to view television programs and set recordings using a VCR. RX-0847C (Bederson RWS) at Q/A 48; JX-0006 (‘512 patent) at 1:55-64, 1:22-34 (“...[w]hen the selected program begins, the program guide tunes the set-top box to the channel showing the program and directs a videocassette recorder (“VCR”) to begin recording....”), 1: 48-51 (“It is therefore an object of the present invention to provide an interactive television program guide system which allows a user to record one program while simultaneously watching another program.”). The ‘512 patent also proposes that each user has a user guide equipment that acts as a receiver, such as a STB. JX-0006 at 4:54-5:7 (“Each user has user

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program guide equipment that acts as a receiver. The user program guide equipment is typically a set-top box such as set-top box 112....”). As is shown clearly in Fig 2(a) of the ‘512 patent, a POSITA would understand that the STB hosts the program guide and provides “program guide command signals.” RDX-1243 (JX-0006 at Fig 2(b) (annotated)) (highlighting the STB (112) with two tuners); RX-0847C at Q/A 49. In addition, the STB provides further commands, via the infrared transmitter to other equipment (e.g. a video cassette recorder). See JX-0006 at 6:65-7:7 (“The interactive television program guide command signals on line 212 that are provided to IR transmitter 200 allow channel selection requests and VCR start and record commands to be sent from the interactive television program guide in set-top box 112 to VCR 114...”), Fig 2(b) (element 200).

See Resps. Br. at 181-82.

Rovi replies:

Respondents contend that the claim term “system” requires that the claimed system be limited to a system existing entirely on user equipment (which they further contend must be located solely, only, and entirely in the user’s home) by cherry-picking statements from the specification, while ignoring those which do not support their construction. Resps. Br. at 181-82. As Rovi has explained, there is no basis for reading in Respondents’ overly-narrow definition of system, which, were it adopted, would impermissibly exclude disclosed embodiments of the claimed invention. Compls. Br. at 148-149 (Rovi explaining that claimed “system” as shown in Figs. 1(a) and 2(a) is not limited to a system existing only on user equipment, which is located inside a user’s home).

Rovi Reply at 56-57.

Comcast presents its reply for this term along with the “interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive . . . ; determine . . . ; and in response to the determination, display . . .” and “interactive television program guide on the system” arguments, as follows:

Rovi misstates *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). See Compl. PoHB at 182-183. The lack of the term “means” does not create a strong presumption that § 112(6) does not apply, as Rovi contends. *Id.* at 182, n. 24. Rather

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*Williamson* holds exactly the **opposite** - that the presumption that § 112(6) does not apply to a patent claim that does not use the word “means” **is not strong**. See *Williamson*, 792 F.3d at 1349 (“Our consideration of this case has led us to conclude that such a heightened burden is unjustified and that **we should abandon characterizing as “strong” the presumption** that a limitation lacking the word “means” is not subject to § 112, para. 6.”) (emphasis added).

And though claim 13 admittedly lacks the specific term “means,” the entirety of the claim limitation—“an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to”—recites function, without structure, which amounts to impermissible functional claiming. The cure for functional claims is means-plus-function treatment. And the only structure for an “interactive television program guide implemented on the system . . .” referenced in the ‘512 is set top box 112 with a processor, or other suitable equipment with similar circuitry, at the user’s premises. RX-0847C at Q/A 46-50.

Resps. Reply at 56-58 (emphasis in original).

Comcast has not presented an argument, with sufficient intrinsic or extrinsic support, to warrant construing “system” as “user television equipment.”

The patent uses the word “system” in several different ways. In a broad sense, the patent uses “system” to describe the entire apparatus that distributes television:

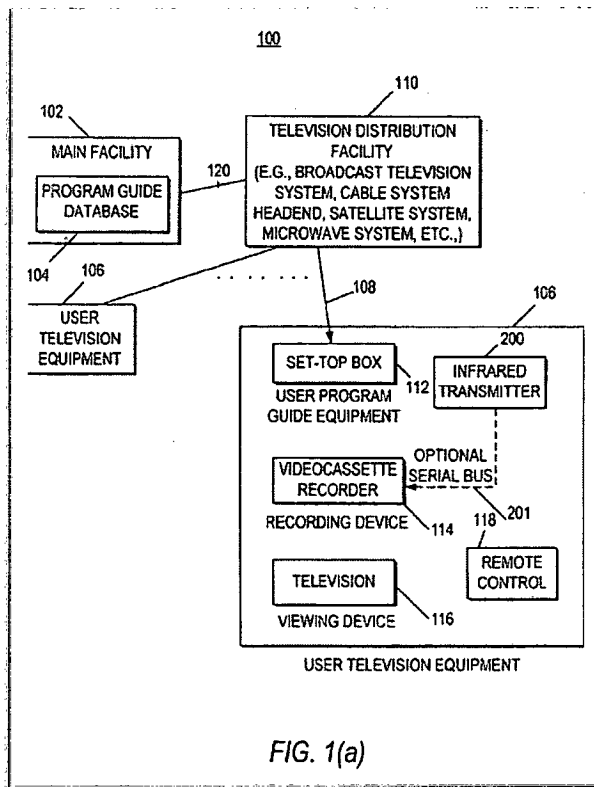
FIG. 1(a) shows **an illustrative interactive television program guide system 100** in accordance with the present invention. Main facility 102 contains a program guide database 104 for storing program guide information such as television program guide listings data, pay-per-view ordering information, television program promotional information, etc. Information from database 104 may be transmitted to multiple television distribution facilities 110 via communications link 120. Only one such facility 110 is shown in FIG. 1 to avoid over-complicating the drawing. Communications link 120 may be a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, a combination of such links, or any other suitable communication path. If it is desired to transmit video signals over link 120 in addition to data signals, a relatively high bandwidth link such as a satellite link is generally preferable to a relatively low bandwidth

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link such as a telephone line. Television distribution facility 110 is a facility for distributing television signals and data to users, such as a cable system headend, a broadcast distribution facility, or a satellite television distribution facility.

JX-0006 at 3:62-4:14.

This is Figure 1(a):



In particular, the figure indicates that “user television equipment” (106) is a part of system (100).

The patent also discloses the following systems:

- a “voice recognition system,”
- a “cable system headend,”
- “terrestrial wireless communications systems such as microwave-based communications systems or the like,”
- “conventional broadcast television systems,”
- a “two-tuner set-top box system,”



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- a “single-tuner RF-bypass-switch system,” and
- an “interactive television program guide system”

See generally JX-0006. These “systems” indicate that the patent is using the word “system” to describe a collection of components that work together.

Accordingly, the administrative law judge construes “system” to mean “an integrated assemblage of hardware and/or software elements operating together to accomplish a prescribed end purpose.”

(17) *Interactive television program guide implemented on the system*

The phrase “interactive television program guide implemented on the system” appears only in claim 13. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
“implemented on the system” has its plain and ordinary meaning, where the plain and ordinary meaning is “put into effect on the system”	Comcast does not clearly present a construction in its post-hearing brief.

See Rovi Br. at 149; Resps. Br. at 181-82.

Rovi’s argument follows:

“Interactive television program guide implemented on the system” has its plain and ordinary meaning—“put into effect on the system.” CX-0003C (Balakrishnan WS) at Q/A 260.

Respondents contend that this term does not need to be construed; however, should construction be deemed necessary, it should be construed as—“executing on the user television equipment.” CDX-0502 (Proposed Constructions) at 6-7. As with the prior term, Respondents improperly limit the claimed “system” to “user equipment” and further improperly require that the “interactive television program guide” “execute” solely on “user equipment” (in the user’s home). CX-0003C (Balakrishnan WS) at Q/A 261. The ‘512 Patent places no restriction on where, in the claimed system, the “interactive television program guide” must “execute.”

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JX-0006 ('512 Patent) at col. 2, lns. 27-30 and col. 2, lns. 34-44 (describing Figs. 1(a) and (b)).

Rovi Br. at 149-50.

Comcast presents its arguments for this phrase along with the “interactive television program guide” / “system” terms. *See* Resps. Br. at 181-82.

Rovi replies:

Respondents address this term together with the term “system” and therefore do not separately address either side’s construction for “implemented on the system.” Resps. Br. at 181-82. For the same reasons set forth in Compls. Br. at 149-50 and in Section VII(A)(14), *supra*, Rovi’s construction should be adopted.

Rovi Reply at 57.

Comcast presents its reply for this phrase along with the “interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive . . . ; determine . . . ; and in response to the determination, display . . .” and “system” reply, as follows:

Rovi misstates *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). *See* Compl. PoHB at 182-183. The lack of the term “means” does not create a strong presumption that § 112(6) does not apply, as Rovi contends. *Id.* at 182, n. 24. Rather *Williamson* holds exactly the *opposite* - that the presumption that § 112(6) does not apply to a patent claim that does not use the word “means” *is not strong*. *See Williamson*, 792 F.3d at 1349 (“Our consideration of this case has led us to conclude that such a heightened burden is unjustified and that *we should abandon characterizing as “strong” the presumption* that a limitation lacking the word “means” is not subject to § 112, para. 6.”) (emphasis added).

And though claim 13 admittedly lacks the specific term “means,” the entirety of the claim limitation—“an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to”—recites function, without structure, which amounts to impermissible functional claiming. The cure for functional claims is means-plus-function treatment. And the only structure for an “interactive television

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program guide implemented on the system . . .” referenced in the ‘512 is set top box 112 with a processor, or other suitable equipment with similar circuitry, at the user’s premises. RX-0847C at Q/A 46-50.

Resps. Reply at 56-58 (emphasis in original).

The administrative law judge has already separately construed the terms “interactive television program guide” and “system.” Thus, the parties disagree on what the word “implemented” means.

As an initial matter, the administrative law judge agrees with Rovi that it is not necessary to construe the term. However, in the alternative, the administrative law judge construes the word “implemented” to mean “put into effect.” As Rovi correctly notes, the ‘512 Patent places no restriction on where, in the claimed system, the “interactive television program guide” must “execute.”

(18) *A user*

The term “a user” appears throughout the claims and specification. The parties have proposed the following constructions:

<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
“a user” has its plain and ordinary meaning, where the plain and ordinary meaning is “one that uses”	. . . “users,” are users of a STB that watch and record programs.

See Rovi Br. at 150; Resps. Br. at 184.

Rovi’s entire argument for this term follows:

The term “a user” should be interpreted to have its plain and ordinary meaning – “one that uses.” CX-0003C (Balakrishnan WS) at Q/A 262. As with “system,” there is nothing in the intrinsic evidence limiting the meaning of “user” *Id.*

Rovi Br. at 150.

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Comcast argues:

As Rovi's expert testified, the '512 Patent is directed at alerting a user where both tuners of the set-top box are already in use. Tr. 290:15-25. Thus, the "users," are users of a STB that watch and record programs. And, of course, the claims themselves require input from a person viewing the television, and that the user is capable of providing responses through the program guide. *Id.* at Cl. 1 ("displaying an alert *that provides a user with an opportunity to direct the interactive television program guide* to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation") (emphasis added); Cl. 2 ("*receiving a user selection* to not cancel the function of the second tuner; and *in response to the user selection* to not cancel the function of the second tuner, continuing to perform the function of the second tuner") (emphasis added). It is unclear what Rovi's construction is intended to do, beyond provide greater flexibility for purposes of alleging infringement.

Resps. Br. at 184 (emphasis in original).

Rovi replies:

Similar to their construction for "system," discussed at Section VII(A)(14), *supra*, Respondents improperly limit the term "user" to a person who records or watches programs on user television equipment. The term "user" is not so limited and, consistent with its ordinary meaning, means "one that uses." Compls. Br. at 150.

Rovi Reply at 57.

The administrative law judge has determined that it is not necessary to construe the term "a user." The patent uses this term in accordance with its plain and ordinary meaning.

### 3. Representative Products

Rovi accuses two guide systems, the X1 and Legacy systems, of infringing the '512 Patent. Rovi Br. at 150-51.

#### a) *X1 Products*

For the X1 products, Rovi argues:

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Rovi accuses X1 Guide products of infringing the '512 patent. CX-0003C (Balakrishnan WS) at Q/A 296, 298. The specific "X1 Accused Products" accused in this Investigation with respect to the '512 patent are listed in the Table 1 of the Joint Outline. The representative X1 Accused Product is the ARRIS XG1v3 AX013ANC, but Rovi's proof of infringement applies equally to all accused X1 Guide Products. CX-0003C (Balakrishnan WS) at Q/A 303. With respect to the '512 Patent, and as conceded by Respondents' expert and fact witnesses, each set-top box that runs the X1 Guide works in materially the same way such that minor hardware differences between the various models of X1 Accused Products are irrelevant to whether those products infringe any of the claims of the '512 Patent. Each X1 Guide product that supports the X1 Guide [

] CX-0003C (Balakrishnan WS) at Q/A 304-08; JX-0081C (Comcast/ARRIS Master Supply Agreement) at § 9.04; *see also* JX-0096C (Folk Dep. Tr.) 93:17-98:23. Indeed, Comcast witness Albert Garcia confirmed in his testimony at the Hearing that each X1 Accused Product [

] is immaterial to infringement of the '512 Patent. Garcia Tr. 614-15.

Rovi Br. at 150-51. Rovi then argues that Comcast's argument about "the specific 'system-on-a-chip' (SoC) that each product uses" is disingenuous, because the "different models of SoCs do not have any bearing on Rovi's proof of infringement for the '512 Patent." *Id.* at 151.

Comcast's expert did not analyze the various X1 products Comcast contends warrant disparate analysis. Additionally, the exhibit Comcast uses to identify disparate product groups, RX-0870, was created by its counsel and does not contain evidentiary support.

Accordingly, the administrative law judge has determined that Rovi has presented sufficient evidence, and that Comcast has not rebutted this evidence. *See Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010) ("Appellants contend that the ALJ improperly shifted the burden to Appellants to establish that the non-modeled accused packages would behave differently than those that were modeled. Rather than improper burden shifting,

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the ALJ properly found that Appellants simply failed to rebut the substantial evidence set forth by Tessera.”); *see also TiVo, Inc. v. EchoStar Commc’ns Corp.*, 516 F.3d 1290, 1308 (Fed. Cir. 2008). Thus, the administrative law judge finds that the ARRIS XG1v3 AX013ANC is representative. *See* CX-0003C at Q/A 304 (“each product listed in the Corrected Joint ID that supports the XI Guide [

] to all users of any XI-capable product.”).

### ***b) Legacy Products***

Rovi argues:

Rovi’s proof of infringement applies equally to all accused Legacy Guide Products listed in the Corrected Joint ID. CX-0003C (Balakrishnan WS) at Q/A 405. Whatever differences among Legacy devices may exist, they have no impact on how a given set-top box implements the Legacy Guide software, accesses the relevant servers, or alters the user’s Legacy Guide experience when using any set-top box running the Legacy Guide software. CX-0003C (Balakrishnan WS) at Q/A 405. This was confirmed by Kirk Davis, who provided an example of the operation of the conflict resolution feature of the Legacy guide (RX-0842C (Davis RWS) at Q/A 19) and testified that [

] Davis Tr. 711. The Motorola DCX3501/M (identical to the ARRIS-HD/DVR (Legacy) - MOTRNG200BNMR) is representative of the operation of all Legacy Guide Accused Products determined to be at issue in this Investigation. CX-0003C (Balakrishnan WS) at Q/A 406-08.

Rovi Br. at 152.

As with the X1 guides, Comcast’s expert did not analyze the various Legacy products that Comcast contends warrant disparate analysis. Additionally, the exhibit Comcast uses to identify disparate product groups, RX-0870, was created by its counsel and does not contain evidentiary support.

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Accordingly, the administrative law judge has determined that Rovi has presented sufficient evidence that the Motorola DCX3501/M is representative and that Comcast has not rebutted this evidence. *See Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010) (“Appellants contend that the ALJ improperly shifted the burden to Appellants to establish that the non-modeled accused packages would behave differently than those that were modeled. Rather than improper burden shifting, the ALJ properly found that Appellants simply failed to rebut the substantial evidence set forth by Tessera.”); *see also TiVo, Inc. v. EchoStar Commc'ns Corp.*, 516 F.3d 1290, 1308 (Fed. Cir. 2008). Thus, the administrative law judge finds that the Motorola DCX3501/M is representative. *See* CX-0003C at Q/A 316 (“each product listed in the Corrected Joint ID that supports the Legacy Guide [

] to all users of any Legacy Guide-capable product.”).

#### 4. Literal Infringement

Rovi explains that it “asserts claims 1, 10, 13, and 22 of the ‘512 Patent. Claim 1 is a method claim and claim 13 is a system claim that essentially mirrors claim 1.” Rovi Br. at 134.

##### *a) Claims 1 and 10*

Rovi argues that claim 1 and 10 are “directly infringed when a user performs the claimed method in the United States while using the X1 Guide.” *See* Rovi Br. at 152 (citing CX-0003C (Balakrishnan WS) at Q/A 326).

Claim 1 follows:

1. A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising:

receiving a request to perform a tuning operation;

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determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and

in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

JX-0006 at 18:35-47.

Claim 10 follows:

10. The method of claim 1 wherein the displaying the alert comprises displaying a display screen using the interactive television program guide that provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation.

JX-0006 at 19:28-33.

*(1) Claim 1: "First and second tuners"*

*(a) X1 System*

Rovi argues that the X1 system has multiple tuners. Rovi Br. at 152. Rovi relies upon Dr. Balakrishnan's testimony, information from Comcast's website, and photos from Mr. Williams's use of the X1 guide. *Id.* (CX-0003C (Balakrishnan WS) at Q/A 330-58; CX-1654; CX-1629).

Comcast argues that the X1 system does not have at least a second tuner because the X1 system has a Broadcom SoC that uses "full band capture" technology. Resps. Br. at 188; RX-0846C (Garcia) at Q/A 13. Full band capture collects an entire range of frequencies (0 to 1 GHz) and culls individual channels from the entire range rather than filtering a single analog



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signal from the spectrum and converting it to a digital signal. RX-0846C at Q/A 14-15; RX-0847C (Bederson RWS) at Q/A 67-73, 81.

The administrative law judge has determined that Rovi has not shown that the accused X1 products literally contain a second tuner.

As an initial matter, Dr. Balakrishnan's testimony does not identify any tuner; rather, he infers that multiple tuners exist because he was "able to simultaneously record five shows" and because a Comcast webpage used the word "tuner." *See, e.g.*, CX-0003C at Q/A 332-35; *but see* RX-0846C (Garcia RWS) Q/A 20-21; RX-0847C (Bederson RWS) at Q/A 106-109 (the reference to "tuners" is a reference to virtual tuners).

Further, Dr. Balakrishnan does not point to schematics or owners manuals for the accused representative product, the ARRIS XG1v3 (AX013ANC), to identify a second tuner. *Compare id. with* CX-0004C (Delp WS) at Q/A 189 (for the '871 Patent, Dr. Delp relied upon CX-1305C (Pace- XG1v3 Multi-Tuner Video Gateway), CX-1353C (XG1v3 Main Board Schematic), and CX-1317C (Comcast- HW Specification for XG 1 and XG2 STB Products) in identifying a processor). Although Dr. Balakrishnan points to a MG1 data sheet, CX-1304, the evidence shows that those set-top boxes were never sold to Comcast and that the "multi-tuner" reference is anachronistic terminology that has been carried forward to the full band capture era. *See* RX-0855C (Folk) at Q/A 4-5 (Mr. Folk also explains that the MG1 does not have multiple physical tuners.).

Additionally, Dr. Balakrishnan discusses the SoC only when asked about Comcast's arguments. *See, e.g.*, CX-0003C at Q/A 345. Dr. Balakrishnan then speculates that because the four Q/AM demodulators depicted in the SoC act like tuners, "there *could be* four different circuits within the 'digital tuning' rectangle, which happen to not be shown in the Broadcom

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figure, but which *could exist* within that rectangle.” *Id.* at Q/A 347 (emphasis added).<sup>147</sup> Dr.

Balakrishnan’s testimony contains too much doubt to conclude that it is more likely than not that the SoC literally has first and second tuners.

Thus, Rovi has not shown that the accused X1 products literally contain a second tuner.

(b) *Legacy System*

Rovi argues:

The accused Legacy Guides have two tuners under the parties’ respective constructions and therefore have “multiple tuners,” as stated in the preamble of claim 1; the Legacy Guides do not use a “full band capture” RF Front End, like the X1 devices. CX-0003C (Balakrishnan WS) at Q/A 410 13; Davis Tr. 701-03; CX-1288C (DCX3501-M Dual Tuner Datasheet); CX-1600 (Legacy Screenshots for the ‘512 Patent) at 4.

Rovi Br. at 165-66.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(E)(2).

The administrative law judge has determined that the evidence shows that the accused Legacy products have first and second tuners. *See* CX-0003C (Balakrishnan WS) at Q/A 410 13; Tr. (Davis) 701-703; CX-1288C (DCX3501-M Dual Tuner Datasheet); CX-1600 (Legacy Screenshots for the ‘512 Patent) at 4.

(2) *Claim 1: “Interactive television program guide”*

(a) *X1 System*

Rovi argues:

Claims 1 and 13 further refer to an “interactive television program guide.” The accused X1 Guide includes an interactive television program guide under both Rovi’s and Respondents’ proposed constructions, as Dr. Balakrishnan opined. CX-0003C (Balakrishnan WS) at Q/A 356-357. There is evidence of the

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<sup>147</sup> Rovi’s Brief echoes this uncertainty. Rovi Br. at 158 (“each “tuner” *could* comprise . . .” (emphasis added)).

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interactive guide in the source code that operates with the X1 Guide devices. *See* CX-1698C (Comcast's Source Code Range) at COMC\_ITC1001\_SC-002193, line 8419 (Guide.java, function manageTuner) (including code depending on Guide.java and code on which Guide.java depends); CX-0003C (Balakrishnan WS) at Q/A 357. There are also a number of documents that demonstrate the presence of the interactive television guide. CX-0003C (Balakrishnan WS) at Q/A 357. And CX-1629 (X1 Screenshots for the '512 Patent), at 1-7, shows screenshots of the interactive television program guide running on the X1 Accused Products.

Rovi Br. at 160.

Comcast's arguments about the "interactive television program guide" are directed to claim 13, *see* Resps. Br. at 199, which are addressed separately. Comcast does not rebut this argument for claim 1. *See generally* Resps. Br., Section IX(E)(1); Resps. Reply, Section VII(D)(1).

The administrative law judge has determined that the X1 products satisfy the "interactive television program guide" limitation of claim 1, as the method is performed using an interactive television program guide.

### *(b) Legacy System*

Rovi argues:

The accused Legacy Guides also have an interactive television program guide under both side's constructions. CX-0003C (Balakrishnan WS) at Q/A 415, 416; CX-1600 (Legacy Screenshots for the '512 Patent) at 1.

Rovi Br. at 166.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(E)(2).

The administrative law judge has determined that the evidence shows that the accused Legacy products satisfy the "interactive television program guide" limitation, as the method is

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performed using an interactive television program guide. *See* CX-0003C (Balakrishnan WS) at Q/A 415, 416; CX-1600 (Legacy Screenshots for the '512 Patent) at 1.

### (3) *Claim 1: "Receiving a request"*

#### (a) *X1 System*

Rovi argues:

Claim 1 recites a first step of "receiving a request to perform a tuning operation" and claim 13 recites an "interactive television program guide" that is operative to "receive a request to perform a tuning operation." Dr. Balakrishnan used the X1 Guide device and witnessed it receive his request to perform a tuning operation, such as viewing and/or recording a program. CX-0003C (Balakrishnan WS) at Q/A 361-62; CX-1629 (X1 Screenshots for the '512 Patent) at 1 (illustrating how the interactive television program guide in the X1 Accused Products receives a request to perform a tuning operation).

Rovi Br. at 160.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(E)(1).

The administrative law judge has determined that the evidence shows that the accused X1 products satisfy the "receive a request to perform a tuning" limitation. *See* CX-0003C (Balakrishnan WS) at Q/A 361-62; CX-1629 (X1 Screenshots for the '512 Patent) at 1 (illustrating how the interactive television program guide in the X1 Accused Products receives a request to perform a tuning operation).

#### (b) *Legacy System*

Rovi argues:

The Legacy Guide products, when used, "receive a request to perform a tuning operation" under both side's constructions for "tuning operation." CX-0003C (Balakrishnan WS) at Q/A 417.

Rovi Br. at 166.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(E)(2).

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The administrative law judge has determined that the evidence shows that the accused Legacy products satisfy the “receive a request to perform a tuning” limitation. *See* CX-0003C (Balakrishnan WS) at Q/A 417.

(4) *Claim 1: “Determining neither tuner is available”*

(a) *X1 System*

Rovi argues that there are two tuners because “[g]iven that, under either party’s construction, there are multiple tuners in the X1 Guide device, there must be a first tuner and a second tuner in the accused X1 Guide devices.” Rovi Br. at 161. Rovi then argues:

The accused X1 Guide devices further perform the step of “determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation.” *Id.* at Q/A 372. Applying both side’s constructions, if all five tuners in the X1 Guide devices are currently tuned to five programs which are also being recorded, then all five tuners are unavailable, *i.e.*, they cannot perform the requested tuning operation (Rovi’s construction) and are “in use” (Respondents’ construction). *Id.* at Q/A 372-76. The X1 Guides determine that neither the first nor the second tuner is available, as demonstrated by the alert display which informs the user of this fact. CX-1629 (X1 Accused for the ‘512 Patent) at 2, 3.

*Id.* With regard to the language requiring that the tuners “are both capable of performing the requested tuning operation,” Rovi argues “[b]ecause there are five tuned-to channels, it follows that there are five tuners that are capable of performing the user’s requested tuning operation, *i.e.*, tuning to a requested channel to view and/or record the program.” *Id.*

Comcast argues that a cable card imposes a rule on the SoC that limits the number of programs a user can watch or record and that:

This rule regarding the maximum number of programs the cable card can handle is unrelated to any alleged “tuners.” Allowing the “determining” limitation to be satisfied by a rule that is unrelated to tuners, would eviscerate the claim language “neither a first tuner nor a second tuner are available.” And it would ignore the purpose

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of the invention – to avoid tuner conflicts. Under this logic, any function that resulting in an appropriate alert, as recited in the next limitation, would satisfy the “determining” step.

Resps. Br. at 192 (citing RX-0846C at Q/A 24-26; RX-0847C (Bederson RWS) at Q/A 38, 94; Tr. 624-630).

The administrative law judge previously determined that Rovi has not shown that the accused X1 products literally contain a second tuner. Accordingly, Rovi cannot show that the accused X1 products determine that the second tuner is not available, and the “determining” limitation is not satisfied.

However, in the event that it is later determined that the X1 products satisfy the second tuner limitation, then the administrative law judge has determined that the accused X1 products satisfy the “determining” limitation. In particular, the evidence shows that the X1 system determines that two tuners (out of five, due to the limits imposed by the cable card) are not available to perform a requested operation (*e.g.*, watching or recording another program). *See* CX-0003C at Q/A 366-68. Claim 1 is not limited one specific algorithm, process, or structure that dictates the two tuners’ availability or capability to perform the requested operation, as Comcast suggests. The evidence shows that the X1 system determines that the tuners are not available because the system displays an alert showing that “All Tuners Are in Use.” *See id.* at Q/A 375; CX-1629 at 3.

### (b) *Legacy System*

Rovi argues:

The Legacy Guides meet this limitation whenever the tuned-to signals of the two tuners in a Legacy Guide are being used to record programs and a user tunes to a different program that is not being recorded to either view or record the tuned-to signal. *Id.* at Q/A 418; Davis Tr. 709; CX-1600 (Legacy Screenshots for the ‘512 Patent) at 2, 4.

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Rovi Br. at 166.

Comcast argues:

The Accused Legacy STBs do not determine that “neither a first tuner nor a second tuner are available” under either party’s construction. The only logical reading of both parties’ constructions, is that the tuners “cannot perform the requested tuning operation” (under Rovi’s construction) or are “in use” (Respondents’ construction) any time the tuners are occupied, for example, by either recording or displaying a program. Otherwise, the limitation is rendered meaningless, because “available,” is simply expanded to read on rules, and no longer addresses the tuner conflicts, which even Dr. Balakrishnan agrees is the stated purpose of the invention.

Comcast’s Legacy STBs do not “determine that neither a first tuner nor a second tuner,” because they do not determine that the tuners “cannot perform the requested tuning operation,” or are “in use” in all cases. For example, if the user is recording a first program on channel 5, and watching a second program on channel 6, both tuners are occupied. But, the user is permitted to change the channel to watch channel 7. Rather, the accused alerts only arise when a user sets two simultaneous recordings. And the system’s only determination is that two recordings are in progress, not that both tuners are not available.

Resps. Br. at 199-200.

Comcast’s reply follows:

Rovi’s Post Hearing Brief speaks volumes. According to Rovi, the Legacy STBs determine a conflict “whenever the tuned to signals of the two tuners in a Legacy Guide *are being used to record programs.*” Compl. PoHB at 166. The accused alert does not occur whenever the tuners are “not available,” for example when one tuner is used to record, and the other is used to display a program. Rather, Rovi attempts to read the claims of the ‘512 patent on the application of a rule that provides an alert when two simultaneous recordings are set. This cannot satisfy either parties’ [*sic*] construction for the “determining” limitation. Resp. PoHB at 199-200. And it, has nothing to do with the purpose of the invention, as stated by Rovi’s own Dr. Balakrishnan. Tr. 297:7-13; RX-0847C (Bederson RWS) at Q/A 93 (discussing Balakrishnan deposition testimony).

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Resps. Reply at 67. Dr. Bederson's testimony, RX-0847C at Q/A 93, is specific to the X1 system. The cited transcript testimony follows:

Q. All right. So every reference to an alert occurring in the patent, in the drawings, in the specification, in the provisional application, is when all of the tuners are in use or busy; isn't that true?

A. "The references we have just gone through, yes. But I will not make a statement saying every single reference.

Tr. 297.

The administrative law judge has determined that the evidence shows that the accused Legacy products meet this limitation. Rovi supports its argument with expert testimony and pictures showing the Legacy guide in operation. *See* CX-0003C at Q/A 418; Tr. (Davis) 709; CX-1600 (Legacy Screenshots for the '512 Patent) at 2, 4. Comcast's brief does not cite any evidence, while its reply cites evidence that does not discuss the any accused products (Tr. 297) and testimony for the wrong products (RX-0847C (Bederson RWS) at Q/A 93, discussing the accused X1 products). *See* Resps. Reply at 64. Accordingly, the accused Legacy products satisfy this limitation.

(5) *Claim 1: "Displaying an alert" and "opportunity to cancel"*

(a) *X1 System*

Rovi argues that the X1 guides display the required alert. Rovi Br. at 163-64.

Comcast's brief reargues the claim constructions and alleges that Dr. Balakrishnan does not have any evidence of any customers performing the process he used to conclude the accused X1 products infringe. Comcast also argues that the set-top boxes do not infringe because the "Comcast X1 STBs do not have a screen on which the user sees an alert to cancel a function."

*Id.* at 198.



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Rovi's reply points to evidence that customers used the accused X1 products in an infringing manner. *See* Rovi Reply at 62, n.6 ("RX-0839C (Nush RWS) at Q/A 10-11 (Comcast employee Mr. Nush testifying that [ ] of Comcast users of the X1 Accused Products have seen the 'Accused Screen'—*i.e.*, the conflict alert screen—which must necessarily have been displayed on a display device connected to an X1 Accused Product).").

The administrative law judge has determined that the X1 system, as used by Comcast customers, satisfies this limitation. The evidence shows that the X1 system displays an alert that allows the user to cancel a function of the second tuner. *See* CX-0003C (Balakrishnan WS) at Q/A 379-90; CX-1629 (X1 Screenshots for the '512 Patent). Comcast's argument about the screen misses the point of Rovi's allegation, that claim 1 "is directly infringed when a user performs the claimed method in the United States while using the X1 Guide." Rovi Br. at 152.

### *(b) Legacy System*

Rovi argues:

In response to the determination, the interactive television program guide on the Legacy Guide set-top box outputs an alert that provides a user with an opportunity to direct the interactive television program guide to stop a function of the second tuner (and even the "last allocated" tuner) to permit the second (or last allocated) tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 419; CX-1600 (Legacy Screenshots for the '512 Patent) at 4; RX-0842C (Davis RWS) at Q/A 19; Davis Tr. 711-13.

This alert "provides the user with an opportunity to direct the interactive television program guide" to "Swap to view your other recording," to "Continue recording, don't change channel," or to "Stop recording, change channel." CX-0003C (Balakrishnan WS) at Q/A 419. The first two options, to swap views or to continue recording and dismiss the alert, have the expected outcomes. *Id.* By choosing the "swap" option, the user can select the first or last allocated tuner to cancel (choosing to swap to the last allocated tuner for canceling would meet this limitation under Respondents' construction). *Id.*

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If selected, the option “Stop recording, change channel” constitutes a direction to “cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.” CX-0003C (Balakrishnan WS) at Q/A 419; Davis Tr. 710.

Rovi Br. at 166-67.

Comcast argues that the accused Legacy products do not provide an alert “in response to the determination” because in the Legacy guide an “alert condition is provided in response to a rule (both tuners used for recording), and not the claimed condition (both tuners are not available).” Resps. Br. at 200. Comcast also argues that the set-top boxes do not infringe because “Comcast Legacy STBs do not include a screen (*e.g.*, TV) to display an alert.” *Id.* at 201.

Rovi replies that Comcast’s “scenario is irrelevant to infringement—Rovi has shown that in the Legacy Guide Accused Products when both the first and the second tuner are both unavailable to perform the requested tuning operation an alert screen is displayed to the user (just as the claims of the ‘512 Patent require).” Rovi Reply at 63.

The administrative law judge has determined that the accused Legacy products satisfy this limitation. The evidence shows that the alert is displayed when the tuners are not available for recording and a user can cancel a function from the alert. *See* CX-0003C at Q/A 419; CX-1600 (Legacy Screenshots for the ‘512 Patent) at 4; RX-0842C (Davis RWS) at Q/A 18-19; Tr. (Davis) 711-713. Comcast’s argument about the screen misses the point of Rovi’s allegation, that claim 1 “is directly infringed when a user performs the claimed method in the United States while using the Comcast Legacy Guide.” *See* Rovi Br. at 165.

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*(6) Claim 10*

Claim 10 requires that the alert “provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation.” JX-0006 at 19:28-33.

*(a) X1 System*

Rovi argues:

Claim 10 depends from claim 1 and claim 22 depends from claim 13; both add the requirement that displaying the alert comprises displaying a display screen using the interactive television program guide that provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation.

The alert that is shown on the television screen meets both claims 10 and 22, because it provides the user with two options: (1) “Keep Recording,” which, if selected, would prevent the X1 Guide from performing the requested tuning operation and continue to perform the function of the second tuner; or (2) “Change Channel” which would cause the X1 Guide to stop recording the program currently being tuned to by the second tuner and instead tune to and view the requested program. CX-1629 (X1 Screenshots for the ‘512 Patent) at 3.

Rovi Br. at 165.

Comcast does not directly address or rebut Rovi’s arguments about claim 10. *See generally* Resps. Br., Section IX(E)(1).

The administrative law judge has determined that the evidence shows that the accused X1 products literally infringe claim 10, provided that the accused X1 products infringe claim 1. *See*

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CX-1629 (X1 Screenshots for the '512 Patent) at 3; *see also* CX-0003C at Q/A 394-95 (discussing infringement of claim 10); *Ferring*, 764 F.3d at 1411.<sup>148</sup>

*(b) Legacy System*

Rovi argues:

The displayed screen provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 421; RX-0842C (Davis RWS) at Q/A19; Davis Tr. 709-10.

Rovi Br. at 167.

Comcast does not directly address or rebut Rovi's arguments about claim 10. *See generally* Resps. Br., Section IX(E)(2).

The administrative law judge has determined that the evidence shows that the accused Legacy products literally infringe claim 10, provided that the accused Legacy products infringe claim 1. *See* CX-0003C (Balakrishnan WS) at Q/A 421; *Ferring*, 764 F.3d at 1411.

*b) Claims 13 and 22*

Rovi argues that "Claim 13 essentially mirrors claim 1 and, as a system claim, is infringed when the accused devices are (or were) imported into the United States, and/or when they are made, used, or sold in the United States, by Comcast, ARRIS, and/or Technicolor."

Rovi Br. at 152 (citing CX-0003C (Balakrishnan WS) at Q/A 397).

Claim 13 follows:

13. A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising:

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<sup>148</sup> In *Ferring*, the Federal Circuit found a dependent claim not infringed because its corresponding independent claim was not infringed. *Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) ("Because we hold that the asserted independent claims of *Ferring*'s patents are not infringed, the asserted dependent claims are likewise not infringed.")).

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a first tuner;

a second tuner; and

an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to:

receive a request to perform a tuning operation;

determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and

in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

JX-0006 at 19:41-59.

Claim 22 follows:

22. The system of claim 13 wherein the displaying the alert comprises displaying a display screen using the interactive television program guide that provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation.

JX-0006 at 20:47-52.

(1) *Claim 13: "Interactive television program guide implemented on the system"*

(a) *X1 System*

Rovi argues:

Claims 1 and 13 further refer to an "interactive television program guide." The accused X1 Guide includes an interactive television program guide under both Rovi's and Respondents' proposed constructions, as Dr. Balakrishnan opined. CX-0003C (Balakrishnan WS) at Q/A 356-357. There is evidence of the interactive guide in the source code that operates with the X1

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Guide devices. *See* CX-1698C (Comcast's Source Code Range) at COMC\_ITC1001\_SC-002193, line 8419 ([

] CX-0003C (Balakrishnan WS) at Q/A 357. There are also a number of documents that demonstrate the presence of the interactive television guide. CX-0003C (Balakrishnan WS) at Q/A 357. And CX-1629 (X1 Screenshots for the '512 Patent), at 1-7, shows screenshots of the interactive television program guide running on the X1 Accused Products.

Rovi Br. at 160.

Comcast argues that the accused X1 set-top boxes do not [

] Resps. Br. at 199.

In CX-0003C at Q/A 294 (emphasis added), Dr. Balakrishnan identified the accused products, as follows:

**Q294. Can you identify the products accused by Rovi of infringing the '147 patent and the '512 patent in this case?**

A294. Yes. On pages 1-2 of the Corrected Joint ID, there is a description. Based on what it says here, it is my understanding that, with respect to the '512 patent and the '147 patent, *Rovi is accusing set-top boxes* made for Comcast, to Comcast's design specifications, by Arris and Technicolor, that run Comcast's Legacy Guide, which I will refer to as the "Legacy Guide" or Comcast's XI Guide, which I will refer to as the "XI Guide," and otherwise meet the legal requirements of importation, sale, lease, etc. to Comcast or Comcast's customers in the U.S., which includes . . .

Dr. Balakrishnan then quotes the Corrected Joint ID, JX-0084C (Amended Joint Identification of Accused Products), as follows:

all products capable of supporting Comcast's XI or Legacy Guide, that are or were: (1) products purchased by Comcast on or after April 1, 2016, regardless of when they were imported; (2) products installed by Comcast into its customer base on or after April 1, 2016, regardless of when they were purchased by Comcast or imported; and (3) products that Comcast now holds in inventory and that Comcast will, in the normal course of business, install into Comcast's customer base on or after April 1, 2016, regardless of

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when they were purchased by Comcast or imported. The foregoing includes remote controls and applications that operate in conjunction with any of the identified models.

*Id.* (quoting JX-0084C at 1-2). Neither Rovi nor Dr. Balakrishnan has explicitly included Comcast's servers as an accused product. *See id.* (even if the servers were identified, no evidence showing when they were purchased, installed, imported, or held in inventory is cited).

Dr. Balakrishnan then provides testimony about the system in CX-0003C at Q/A 397-400. In Q/A 398-400, Dr. Balakrishnan opined, as follows:

**Q398. Other than the issue of the term "system" and the means-plus-function issue, do you have infringement opinions regarding the remaining limitations of claim 13?**

A398. Yes, all of my infringement opinions that I have already discussed with respect to infringement of claim 1 by the X1 Guide device are equally applicable to claim 13.

**Q399. Okay. Good. Then we can discuss the issue over the term "system"; what is the issue regarding the term "system"?**

A399. Comcast contends that the interactive television program guide is implemented [ ] which are not part of any of the user's television equipment. Claim 13 requires that the interactive television program guide is implemented "on the system." Rovi contends that the "system" is an assemblage of elements, and that assemblage includes the [ ]. Therefore the limitation of claim 13 that the interactive television program guide is implemented on the system is met in the X1 guide, regardless of whether the interactive television program guide is implemented only on the user's equipment, on both the user's equipment and the head end servers, or only on the head end servers, because all are part of the system, under Rovi's construction.

**Q400. So, what is your opinion on the infringement of claim 13 by the accused X1 Guide devices?**

A400. Claim 13 is also infringed by the accused X1 Guide devices, for the reasons I have already discussed.

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Dr. Balakrishnan's statement that "Rovi contends that the 'system' is an assemblage of elements, and that assemblage includes the [ ] conflicts with the Corrected Joint Identification of Accused Products (CX-1702C), which does not identify the [ ]

Dr. Bederson testified that the X1 guide is implemented on Comcast's servers, not on the set-top box. *See* RX-0847C (Bederson RWS) at Q/A 113:

**Q113. Well, why can't Comcast's X1 System qualify as an "an interactive television program guide implemented on the system" under Respondents' construction?**

A113. Because, the Comcast X1 program guide is [ ] as I have previously testified in response to Q51-Q64.

*See also id.* at Q/A 115. Thus, the evidence shows that Rovi has not shown that the accused X1 products literally infringe claim 13.

### *(b) Legacy Products*

Rovi argues:

The interactive television program guide is [ ] which is user equipment, so there is no dispute that the claim limitations of "system" and "implemented on the system" requirements are met even under Respondents' constructions. CX-0003C (Balakrishnan WS) at Q/A 424, 403.

Rovi Br. at 167.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(E)(2).

The administrative law judge has determined that the evidence shows that the accused Legacy products infringe claim 13 (under either party's proposed constructions). *See* CX-0003C (Balakrishnan WS) at Q/A 424 (Q/A 403, which is also cited, pertains to the X1 products).



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### (2) *Claim 22*

#### (a) *X1 System*

Rovi jointly addresses claims 10 and 22 for the accused X1 products. *See* Rovi Br., Section VI(E)(2). Comcast does not directly address or rebut Rovi's arguments about claim 10 or 22. *See generally* Resps. Br., Section IX(E)(1). Thus, the administrative finds claim 22 is infringed for the same reasons claim 10 is infringed.

#### (b) *Legacy System*

Rovi jointly addresses claims 10 and 22 for the accused Legacy products. *See* Rovi Br., Section VI(F)(2). Comcast does not directly address or rebut Rovi's arguments about claim 10 or 22. *See generally* Resps. Br., Section IX(E)(2). Thus, the administrative finds claim 22 is infringed for the same reasons claim 10 is infringed.

#### c) *Proposed Alternative Designs*

Comcast's entire argument is:

Comcast has proposed two design alternatives for the '512 patent that are ripe for adjudication by the ALJ. The software is fixed and was produced before the close of discovery for inspection (RX-0327C; Tr. 734:10-12) and each of the parties' experts have been able to assess whether these alternative designs infringe. *See Flash Memory* at 19-25. Rovi, nor its experts, have expressed any infringement theory as to either of these alternative designs.

The first design simply provides an alert screen when the user has reached their max set of recorded or viewed programs, but does not provide the user the ability to "cancel a function of the second tuner," (or cancel any function). RX-0847 (Bederson RWS) at Q/A 121; RDX-1277; RX-0839C (Nush RWS) at Q/A 5-6. This design alternative has been confirmed as suitable by relevant Comcast personnel. RX-0839C at Q/A 7, 10-11; Tr. 719:20-720:6, 734:18-24.

The second alternative design [

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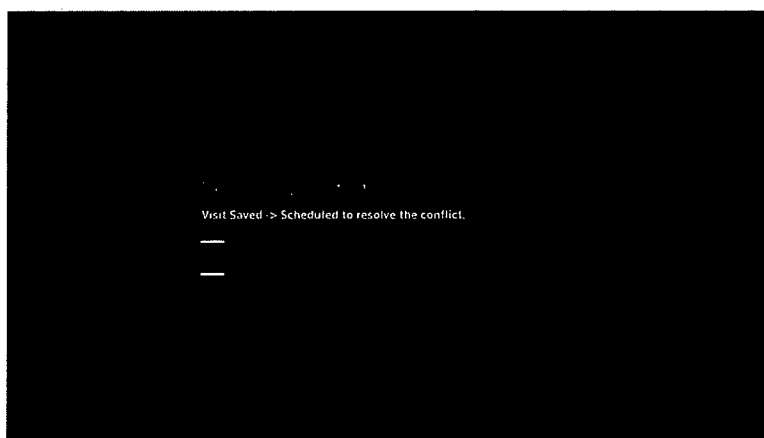
] RX-0839C at Q/A 8. This is considered an acceptable alternative, because it is already used by X1 platform when customers set more than the allowed number of recordings. *Id.* at Q/A 9-11; Tr. 720:25-722:14 (in part, “A That’s correct. There are situations in the product today where that behavior is the current customer experience.”), 734:18-24.

Resps. Br. at 201-02.

Rovi argues that the “proposals are improper, hypothetical, non-infringing alternatives under the controlling case law, because Comcast has not actually implemented either alternative.” Rovi Br. at 168. Rovi notes that “Comcast has done no testing to determine whether its users would actually accept either of these proposed alternatives.” *Id.*

The administrative law judge has determined that the first alternative design, which appears to be for the X1 system only based on its visual appearance, would not infringe and that the second alternative design is too hypothetical to adjudicate.

For the first alternative design, Comcast cites the following screen shot for the first alternative design:



RX-0839C (Nush RWS) at Q/A 6. Mr. Nush testified that “the options to ‘keep recording’ and ‘change channel,’ which were shown in the previous design [the “All Tuners Are in Use” screen]

[ *Id.* In this design, the X1 guide, as used

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by Comcast's customers, [

] Thus, the first alternative design, which is limited to the X1 guide, does not infringe claims 1 or 13.

For the second alternative design, Mr. Nush testified that [

] RX-0839C (Nush RWS) at Q/A 8. This alternative design is too hypothetical to adjudicate because there is no evidence that the proposed design is a finalized product or sufficiently described for consideration by the Commission.

### *d) Conclusions*

In sum, the administrative law judge has determined that:

- the accused X1 products do not infringe claims 1, 10, 13, and 22;
- Comcast's first alternative design does not infringe claims 1, 10, 13, and 22; and
- the accused Legacy products infringe claims 1, 10, 13, and 22.

## **5. Indirect Infringement**

In the event that the accused X1 or Legacy products are found to infringe the '512 Patent, the administrative law judge has analyzed Rovi's inducement and contributory infringement arguments.

### *a) Knowledge of the '512 Patent and Specific Intent to Infringe*

The administrative law judge finds that Comcast had the requisite knowledge of the '871 Patent for the same reasons provided in the discussion of the '556 Patent above. *See* Section IV(A)(5)(a). In general, as with the '556 Patent, Rovi argues that Comcast induces its customers to infringe by instructing them how to use the X1 or Legacy systems and that Comcast induces

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ARRIS and Technicolor by having them make and import set-top boxes into the United States.

*See* Rovi. Br. at 168-69.

### ***b) Induced Infringement of the ‘512 Patent***

#### ***(1) X1 System***

Rovi has shown that a small portion of customers utilize the accused X1 products in an infringing manner. *See* Rovi Reply at 63-64 n.7 (citing RX-0839C (Nush RWS) at Q/A 10-11 for the fact that [ ] of Comcast’s X1 users “have been presented with the recording conflict alert screen as part of their ordinary use of the X1 Accused Products.”). However, Rovi has not shown that Comcast instructs, directs, or advises its users on how to carry out direct infringement of the asserted claims. *See* Resps. Br. at 202 (“Nothing that Rovi cites shows any instruction on how to perform the techniques that allegedly infringe the ‘512 patent.”). In particular, Rovi has not shown that Comcast intends to instruct its users to schedule enough recordings to cause a conflict that would trigger infringement. Thus, Rovi has not shown that it was Comcast’s intent to “‘bring about the desired result,’ which is infringement.” *See Commil USA*, 135 S.Ct. at 1928.

Accordingly, Rovi has not met its burden of showing that Comcast induces its users to infringe the ‘512 Patent.

#### ***(2) Legacy System***

Rovi has not sufficiently shown that customers actually utilize the accused Legacy products in an infringing manner (*e.g.*, there are no corresponding statistics to the Nush statistics cited for the X1 system that show tuner conflict resolution, *see* RX-0839 at Q/A 10-11). *See Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033-34 (Fed. Cir. 2002) (explaining the rule that “[u]pon a failure of proof of direct infringement, any claim of

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inducement of infringement also fails” and then reversing summary judgment of no infringement based upon evidence that the defendant demonstrated the product to prospective buyers).

### *c) Contributory Infringement of the ‘512 Patent*

To prevail on a contributory infringement claim, a complainant must show that, *inter alia*, the accused product is “not a staple article or commodity of commerce suitable for substantial noninfringing use[.]” *See* 35 U.S.C. § 271(c); *Fujitsu*, 620 F.3d at 1326 (“To establish contributory infringement, the patent owner must show the following elements relevant to this appeal: 1) that there is direct infringement, 2) that the accused infringer had knowledge of the patent, 3) that the component has no substantial noninfringing uses, and 4) that the component is a material part of the invention.”).<sup>149</sup>

#### *(1) X1 System*

The administrative law judge has determined that Rovi has fallen short of meeting its burden of showing that the accused products have no substantial non-infringing uses; rather, the evidence shows that the accused products have many substantial non-infringing uses, such as watching television programs or recording less than the maximum number of permitted recordings (*e.g.*, in the accused X1 products, recording three shows simultaneously does not infringe the ‘871 Patent). *See* RX-0839C (Nush RWS) at Q/A 4-11 (explaining [ ] of X1 subscribers ever see the alert screen relating to tuner limitations).

#### *(2) Legacy System*

Rovi does not advance a separate argument for the accused Legacy products. *See generally* Rovi Br., Section VI(I). Comcast has not cited separate evidence for the accused

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<sup>149</sup> *See also* Section III(C)(2)(b) (general principles of law) and Section IV(A)(5)(b) (citing *In re Bill of Lading Transmission*, 681 F.3d at 1338; *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d at 1327; *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d at 851), *supra*.

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Legacy products. *See generally* Resps. Br., Section IX(E)(5). Accordingly, the administrative law judge has determined that Rovi fell short of meeting its burden of showing that the accused Legacy products have no substantial non-infringing uses.

### 6. Domestic Industry – Technical Prong

Rovi identifies the following DI products:

- 1) Rovi i-Guide,
- 2) Rovi Passport,
- 3) Verizon FiOS system, and
- 4) SuddenLink.

Rovi Br., Section VI(J).

#### a) *Claims 1 and 10*

(1) *Claim 1: “First and second tuners”*

(a) *Rovi i-Guide*

Rovi argues:

Rovi i-Guide products have two tuners, under both parties’ constructions. CX-0003C (Balakrishnan WS) at Q/A 574-75, 578; CX-1225 (User Guide: DCX3501-M) at 10; CX-1593 (i-Guide and TotalGuide Screenshots for the ‘512 Patent) at 4.

Rovi Br. at 175.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(1).<sup>150</sup>

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<sup>150</sup> In reply, Comcast argues:

Rovi’s technical DI allegations for the ‘512 patent are rife with deficiencies. Resp. PoHB at 221-226. For the each of the DI products, Rovi’s allegations fail to satisfy at least the “Neither a/the First Tuner nor the Second Tuner Are Available,” and “Cancel[s] a Function of the Second Tuner ...” limitations. Resp. PoHB at 221-226. And, Rovi’s allegation as to Verizon FiOS are incomplete, and rely on conclusory allegations. For example, Rovi

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The administrative law judge has determined that the evidence shows that the Rovi i-Guide products practice this limitation. *See* CX-0003C at Q/A 574-75, 578; CX-1225 (User Guide: DCX3501-M) at 10; CX-1593 (i-Guide and TotalGuide Screenshots for the ‘512 Patent) at 4.

### (b) *Rovi Passport*

Rovi argues:

According to the DCX3400-M User Guide, the Rovi Passport products have two tuners under both side’s constructions. CX-0003C (Balakrishnan WS) at Q/A 593-95, 597; CX-1216 (Motorola - DCX3400 User Guide) at 8; CX-1609 (Passport and TotalGuide xD Screenshots for the ‘512 Patent) at 3.

Rovi Br. at 177.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(2).

The administrative law judge has determined that the evidence shows that the Rovi Passport products practice this limitation. *See* CX-0003C at Q/A 593-95, 597; CX-1216 (Motorola - DCX3400 User Guide) at 8; CX-1609 (Passport and TotalGuide xD Screenshots for the ‘512 Patent) at 3.

### (c) *Verizon FiOS*

Rovi argues:

There are six tuners in the Verizon FiOS products under both sides’ constructions. CX-0003C (Balakrishnan WS) at Q/A 650-51. The Verizon FiOS products can tune to, at most, six programs

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asserts that the “interactive television program guide is implemented on the set top box.” Compl. PoHB at 180 (citing CX-0003C, QA 662). But Dr. Balakrishnan did not review any source code, and cites no support to substantiate this opinion. *Id.*

Resps. Reply at 70 (Section VII(G)). This argument does not dislodge Rovi’s evidence for any of the domestic industry products, nor does it provide a rationale or evidentiary support for ruling for Comcast.

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at the same time, which indicates that there are six tuners in the Verizon FiOS products. CX-0003C (Balakrishnan WS) at Q/A 652; CX-1623 (Verizon Screenshots for the '512 Patent) at 5.

Rovi Br. at 179.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(3) (Comcast later argues about the second tuner in regard to the “cancel a function of the second tuner” limitation, *see* Resps. Br. at 224-25).

The administrative law judge has determined that the evidence shows that the Verizon products practice this limitation. *See* CX-0003C at Q/A 650-52; CX-1623 (Verizon Screenshots for the '512 Patent) at 5.

### (d) *SuddenLink*

Rovi argues:

There are two tuners in the SuddenLink products under both side's constructions. CX-0003C (Balakrishnan WS) at Q/A 668; CX-1217 (Motorola - DCX3400 User Manual).

Rovi Br. at 180.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(4).

The administrative law judge has determined that the evidence shows that the SuddenLink products practice this limitation. *See* CX-0003C at Q/A 667-70.

### (2) *Claim 1: “Interactive television program guide”*

#### (a) *Rovi i-Guide*

Rovi argues:

Rovi i-Guide products have an interactive television program guide under both parties' constructions. CX-0003C (Balakrishnan WS) at Q/A 579-80; CX-1593 (i-Guide and TotalGuide xD Screenshots for the '512 Patent) at 3.

Rovi Br. at 175.



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Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(1).

The administrative law judge has determined that the evidence shows that the Rovi i-Guide products practice this limitation. *See* CX-0003C at Q/A 579-80; CX-1593 (i-Guide and TotalGuide xD Screenshots for the ‘512 Patent) at 3.

### (b) *Rovi Passport*

Rovi argues:

The Rovi Passport products have an interactive television program guide under both sides’ constructions. CX-1609 (Passport and TotalGuide xD Screenshots for the ‘512 Patent) at 1; CX-0003C (Balakrishnan WS) at Q/A 598.

Rovi Br. at 177.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(2).

The administrative law judge has determined that the evidence shows that the Rovi Passport products practice this limitation. *See* CX-0003C at Q/A 598; CX-1609 (Passport and TotalGuide xD Screenshots for the ‘512 Patent) at 1.

### (c) *Verizon FiOS*

Rovi argues:

The Verizon FiOS products have an interactive television program guide under both sides’ constructions. CX-0003C (Balakrishnan WS) at Q/A 653; CX-1623 (Verizon Screenshots for the ‘512 Patent) at 1.

Rovi Br. at 179.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(3) (Comcast later argues about the second tuner in regard to the “cancel a function of the second tuner” limitation, *see* Resps. Br. at 224-25).

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The administrative law judge has determined that the evidence shows that the Verizon products practice this limitation. *See* CX-0003C at Q/A 650-52; CX-1623 (Verizon Screenshots for the ‘512 Patent) at 5.

### (d) *SuddenLink*

Rovi argues:

The SuddenLink products also have an interactive television program guide under both side’s constructions. CX-0003C (Balakrishnan WS) at Q/A 671-72.

Rovi Br. at 181.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(4).

The administrative law judge has determined that the evidence shows that the SuddenLink products practice this limitation. *See* CX-0003C at Q/A 671-72.

### (3) *Claim 1: “Receiving a request”*

#### (a) *Rovi i-Guide*

Rovi argues:

Rovi i-Guide products, when used, “receive a request to perform a tuning operation” under both side’s constructions for “tuning operation.” CX-0003C (Balakrishnan WS) at Q/A 581.

Rovi Br. at 175.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(1).

The administrative law judge has determined that the evidence shows that the Rovi i-Guide products practice this limitation. *See* CX-0003C at Q/A 581.

#### (b) *Rovi Passport*

Rovi argues:

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The Rovi Passport products, when used, “receive a request to perform a tuning operation” under both sides’ constructions for “tuning operation.” CX-0003C (Balakrishnan WS) at Q/A 600.

Rovi Br. at 177.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(2).

The administrative law judge has determined that the evidence shows that the Rovi Passport products practice this limitation. *See* CX-0003C at Q/A 600.

### (c) *Verizon FiOS*

Rovi argues:

The Verizon FiOS products, when used, “receive a request to perform a tuning operation” under both side’s constructions for “tuning operation.” CX-0003C (Balakrishnan WS) at Q/A 655.

Rovi Br. at 179.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(3).

The administrative law judge has determined that the evidence shows that the Verizon products practice this limitation. *See* CX-0003C at Q/A 655.

### (d) *SuddenLink*

Rovi argues:

The SuddenLink products, when used, “receive a request to perform a tuning operation” under both side’s constructions for “tuning operation.” CX-0003C (Balakrishnan WS) at Q/A 673.

Rovi Br. at 181.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(4).

The administrative law judge has determined that the evidence shows that the SuddenLink products practice this limitation. *See* CX-0003C at Q/A 673.

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(4) *Claim 1: "Determining neither tuner is available"*

(a) *Rovi i-Guide*

Rovi argues:

If both tuners are recording shows and the user attempts to change the channel to a new show, the determination is made that neither tuner is available and an alert is displayed stating that "Two recordings are in progress." *Id.* at Q/A 582; CX-1593 (i-Guide and TotalGuide xD Screenshots for the '512 Patent) at 2, 4.

Rovi Br. at 175.

Comcast argues that the Rovi i-Guide products do not practice this limitation because "Dr. Balakrishnan has not demonstrated that the Rovi i-Guide determines that a conflict exists in every scenario where both tuners are allocated." RX-0847C (Bederson RWS) at Q/A 168; Resps. Br. at 222.

The evidence shows that the Rovi i-Guide products practice this limitation because the system displays an alert showing that "TWO RECORDINGS ARE IN PROGRESS." *See* CX-0003C at Q/A 582; CX-1593 (i-Guide and TotalGuide xD Screenshots for the '512 Patent) at 2, 4.

(b) *Rovi Passport*

Rovi argues:

If the tuned-to signals of the two tuners in the Passport are being used to record programs and a user were to tune to different program that is not being recorded to either view or record the tuned-to signal, then the Passport would meet this limitation. CX-0003C (Balakrishnan WS) at Q/A 601; CX-1609 (Passport and TotalGuide xD Screenshots for the '512 Patent) at 1, 3.

Rovi Br. at 177.

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Comcast argues that the Rovi Passport products do not practice this limitation for the same reasons it argued for the i-Guide. *See* Resps. Br. at 223 (“Like i-Guide, this alert is in response to a rule, and not in response to the tuners being unavailable.”).

Like the i-Guide products, the evidence shows that the Rovi Passport products practice this limitation because the system displays an alert showing that “Both tuners are currently busy.” *See* CX-0003C at Q/A 601; CX-1609 (Passport and TotalGuide xD Screenshots for the ‘512 Patent) at 1, 3.

### (c) *Verizon FiOS*

Rovi argues:

The Verizon FiOS products meet this limitation whenever the tuned-to signals of the six tuners in a Verizon FiOS are being used to record programs and a user tunes to a different program that is not being recorded to either view or record the tuned-to signal. CX-0003C (Balakrishnan WS) at Q/A 656; CX-1623 (Verizon Screenshots for the ‘512 Patent) at 4. Upon attempting to change the channel, an alert is displayed stating that there is a “DVR Conflict.” CX-1623 (Verizon Screenshots for the ‘512 Patent) at 5.

Rovi Br. at 179.

Comcast argues that the Verizon products do not practice this limitation for the same reasons as the i-Guide, because “an alert is not provided ‘in response’ to the tuner unavailability, but when all six tuners are used to record. . . . Like i-Guide this alert is in response to a rule, and not in response to the tuners being unavailable.” Resps. Br. at 223.

Like the i-Guide and Passport products, the evidence shows that the Verizon products practice this limitation because the system displays an alert showing a “DVR Conflict.” *See* CX-0003C at Q/A 656; CX-1623 (Verizon Screenshots for the ‘512 Patent) at 4.

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### (d) *SuddenLink*

Rovi argues:

The SuddenLink products meet this limitation whenever the tuned-to signals of the two tuners in a SuddenLink are being used to record programs and a user tunes to a different program that is not being recorded to either view or record the tuned-to signal. CX-0003C (Balakrishnan WS) at Q/A 674. Upon attempting to change the channel to a new show, an alert is displayed stating that “Two Recordings Are in Progress.” CX-0003C (Balakrishnan WS) at Q/A 674.

Rovi Br. at 181.

Comcast argues that the SuddenLink products do not practice this limitation because “the alert is provided when both tuners are set to record. . . . This is a response to a rule [(two tuners recording),] not the first tuner and second tuner being unavailable.” Resps. Br. at 226.

As in the case of the i-Guide, Passport, and Verizon products, the evidence shows that the SuddenLink products practice this limitation because the system displays an alert showing that “TWO RECORDINGS ARE IN PROGRESS.” See CX-0003C at Q/A 674.

### (5) *Claim 1: “Displaying an alert” and “opportunity to cancel”*

#### (a) *Rovi i-Guide*

Rovi argues:

In response to the determination, the interactive television program guide on the Rovi i-Guide set-top box outputs an alert that provides a user with an opportunity to direct the interactive television program guide to stop a function of the second tuner (and even the “last allocated” tuner) to permit the second (or last allocated) tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 583; CX-1593 (i-Guide and TotalGuide xD Screenshots for the ‘512 Patent) at 4. This alert “provides the user with an opportunity to direct the interactive television program guide” to “Swap to view your other recording,” to “Continue recording, don’t change channel,” or to “Stop recording, change channel” (*i.e.*, cancel a function of the second

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(or last-allocated) tuner) CX-0003C (Balakrishnan WS) at Q/A 583. By choosing the “swap” option, the user can select the first or last allocated tuner to cancel (choosing to swap to the last allocated tuner for canceling would meet this limitation under [Comcast’s] construction). *Id.*

Rovi Br. at 175-76.

Comcast argues that the i-Guide products do not satisfy this limitation because the i-Guide “only cancels the function of the foreground tuner, which is an altogether different algorithm than claimed in the ‘512 claims.” Resps. Br. at 222.

The evidence shows that the Rovi i-Guide products practice this limitation because the system displays an alert that allows the user to cancel either recording. *See* CX-0003C at Q/A 583; CX-1593 (i-Guide and TotalGuide xD Screenshots for the ‘512 Patent) at 4.

### *(b) Rovi Passport*

Rovi argues:

In response to the determination, the interactive television program guide on the Rovi Passport set-top box outputs an alert that provides a user with an opportunity to direct the interactive television program guide to stop a function of the second tuner (and even the “last allocated” tuner) to permit the second (or last allocated) tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 602; CX-1609 (Passport and TotalGuide xD Screenshots for the ‘512 Patent) at 3. This alert “provides the user with an opportunity to direct the interactive television program guide” to stop one of the two recordings or to continue recording and dismiss the alert by selecting “Don’t change channels.” CX-0003C (Balakrishnan WS) at Q/A 602.

Rovi Br. at 177-78.

Comcast argues that the Passport products do not practice this limitation because “Rovi has not demonstrated that Passport implements the algorithm claimed by the ‘512 patent.”

Resps. Br. at 223.

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The evidence shows that the Rovi i-Guide products practice this limitation because the system displays an alert that allows the user to cancel either recording. *See* CX-0003C at Q/A 602; CX-1609 (Passport and TotalGuide xD Screenshots for the '512 Patent) at 3.

(c) *Verizon FiOS*

Rovi argues:

In response to the determination, the interactive television program guide on the Verizon FiOS set-top box outputs an alert that provides a user with an opportunity to direct the interactive television program guide to stop a function of the second tuner (and even the "last allocated" tuner) to permit the second (or last allocated) tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 657; CX-1623 (Verizon Screenshots for the '512 Patent) at 5. This alert "provides the user with an opportunity to direct the interactive television program guide" to stop one of the six recordings or to continue recording and dismiss the alert by selecting "Exit." CX-0003C (Balakrishnan WS) at Q/A 657.

Rovi Br. at 179-80.

Comcast argues that the Verizon products do not practice this limitation because Rovi has not identified the second tuner in this limitation's analysis. *See* Resps. Br. at 225-25.

This is Dr. Balakrishnan's testimony:

**Q657. Moving on to the next limitation of claim 1 is the step of "in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation." Do you have an opinion as to whether, when used, the Verizon FiOS products meet this limitation?**

A657. Yes, the Verizon FiOS products meet this limitation under both side's claim constructions. I also discussed this step previously with respect to the XI Guide infringement and I adopt that discussion here. Consistent with my testimony regarding XI Guide infringement, in response to the determination, the interactive television program guide on the Verizon FiOS set top box outputs an alert that is capable of being shown on a display



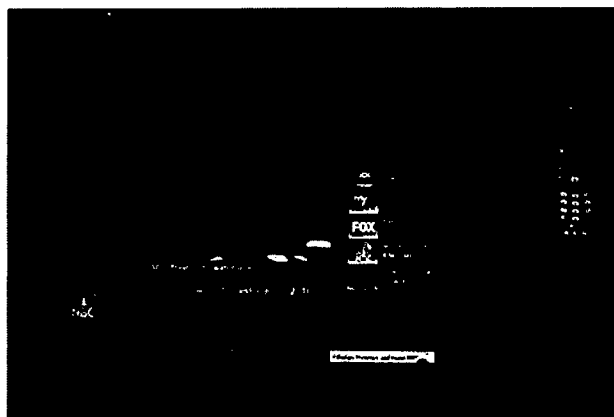
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screen of a television and which is presented visually on a display screen that provides a user with an opportunity to direct the interactive television program guide to stop a function of the second tuner (and even the “last allocated” tuner) to permit the second (or last allocated) tuner to perform the requested tuning operation.

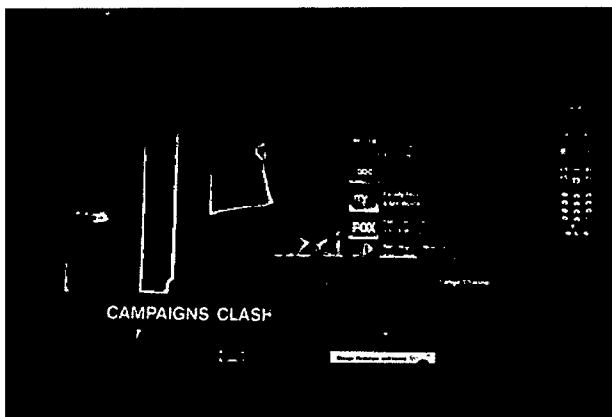
“In response to the determination” of the previous limitation, the Verizon FiOS displays an alert, as shown in exhibit CX-1623.005

This alert “provides the user with an opportunity to direct the interactive television program guide” to stop one of the six recordings or to continue recording and dismiss the alert by selecting “Exit,” have the expected outcomes when received by the Verizon FiOS.

CX-0003C at Q/A 657. These are the screen shots from CX-1623 at 5-6:



CX-1623.000005



CX-1623.000006

The administrative law judge has determined that Rovi has not shown the Verizon products practice this limitation. As Comcast points out, neither Rovi nor Dr. Balakrishnan have sufficiently identified a second tuner.

(d) *SuddenLink*

Rovi argues:

In response to the determination, the interactive television program guide on the SuddenLink set-top box outputs an alert that provides a user with an opportunity to direct the interactive television program guide to stop a function of the second tuner (by swapping, which includes the “last allocated” tuner) to permit the second (or

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last allocated) tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 675. This alert “provides the user with an opportunity to direct the interactive television program guide” to stop one of the six recordings or to continue recording and dismiss the alert by selecting “Continue recording.” CX-0003C (Balakrishnan WS) at Q/A 675.

Rovi Br. at 181.

Comcast argues that Rovi has not shown that the SuddenLink products practice this limitation because the testimony is directed to the Verizon products and because the SuddenLink products use “an altogether different algorithm than is used in the ‘512 patent . . . [that] cannot satisfy Respondents’ construction for this term.” Resps. Br. at 226.

Rovi’s reply does not clarify Dr. Balakrishnan’s testimony. *See* Rovi Reply at 64-65.

The evidence shows that the SuddenLink products practice this limitation because the system displays an alert that allows the user to cancel either recording. *See* CX-0003C at Q/A 674-75. Although Q/A 675 contains obvious errors (the multiple references to the Verizon products), the screen shots in Q/A 675 are for the SuddenLink guide, and the SuddenLink guide is described in the immediately surrounding testimony (*e.g.*, Q/A 673-74, 76-77). It is more likely than not that the SuddenLink guides practice this limitation.

### (6) *Claim 10*

#### (a) *Rovi i-Guide*

Rovi argues:

In Rovi i-Guide products, the interactive television program guide is implemented on the set-top box, which is user equipment, so there is no dispute that the “system” and “implemented on the system” requirements are met even under Respondents’ constructions. CX-0003C (Balakrishnan WS) at Q/A 588.

Rovi Br. at 176.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(1).

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The administrative law judge has determined that the evidence shows that the Rovi i-Guide products practice this limitation. *See* CX-0003C at Q/A 588.

### (b) *Rovi Passport*

Rovi argues:

The displayed screen in the Passport provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 604; CX-1609 (Passport and TotalGuide xD Screenshots for the '512 Patent) at 3.

Rovi Br. at 178.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(2).

The administrative law judge has determined that the evidence shows that the Rovi Passport products practice this limitation. *See* CX-0003C at Q/A 604; CX-1609 (Passport and TotalGuide xD Screenshots for the '512 Patent) at 3.

### (c) *Verizon FiOS*

Rovi argues:

The displayed screen provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 659.

Rovi Br. at 180.

Comcast does not rebut this argument specifically. *See generally* Resps. Br., Section IX(G)(3) (however, Comcast's "second tuner" argument, *see* Resps. Br. at 224-25, applies here too).

This is Dr. Balakrishnan's testimony:

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**Q659. You earlier discussed claim 10 of the '512 patent with respect to infringement by X1 Guides. Do you have an opinion as to whether the Verizon FiOS products meet the limitations of claim 10 of the '512 patent?**

A659. Yes. The Verizon FiOS products meet all of the limitations of claim 10 of the '512 patent. As I showed in the screen shots that I discussed with respect to the last limitation of claim 1 regarding canceling a function, the displayed screen provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation.

Dr. Balakrishnan has not sufficiently explained how the guide allows a user to cancel the function of the second tuner. Accordingly, the administrative law judge has determined that Rovi has not shown the Verizon products practice claim 10.

(d) *SuddenLink*

Rovi argues:

The displayed screen provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation. CX-0003C (Balakrishnan WS) at Q/A 677.

Rovi Br. at 181.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(4).

The administrative law judge has determined that the evidence shows that the SuddenLink products practice claim 10. *See* CX-0003C at Q/A 677.

b) *Claim 13*

Claim 13 requires the guide to be “implemented on a system.” *See* JX-0006 at 19:41-59.

(a) *Rovi i-Guide*

Rovi argues:

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In Rovi i-Guide products, the interactive television program guide is implemented on the set-top box, which is user equipment, so there is no dispute that the “system” and “implemented on the system” requirements are met even under Respondents’ constructions. CX-0003C (Balakrishnan WS) at Q/A 588.

Rovi Br. at 176.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(1).

The administrative law judge has determined that the evidence shows that the Rovi i-Guide products practice this limitation. *See* CX-0003C at Q/A 588.

### (b) *Rovi Passport*

Rovi argues:

In the Rovi Passport products, the interactive television program guide is implemented on the set-top box, which is user equipment, so there is no dispute that the “system” and “implemented on the system” requirements are met even under Respondents’ constructions. CX-0003C (Balakrishnan WS) at Q/A 607.

Rovi Br. at 177.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(2).

The administrative law judge has determined that the evidence shows that the Rovi Passport products practice this limitation. *See* CX-0003C at Q/A 607.

### (c) *Verizon FiOS*

Rovi argues:

In the Verizon FiOS products, the interactive television program guide is implemented on the set-top box, which is user equipment, so there is no dispute that the “system” and “implemented on the system” requirements are met even under Respondents’ constructions. [CX-0003C] at Q/A 662.

Rovi Br. at 180.

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Comcast argues that Rovi has not shown that the guides are “implemented on the system.” Resps. Br. at 225.

Rovi replies: “This is not true—Rovi has presented this evidence. *See* Compls. Br. at 178-80.” Rovi Reply at 65.

This is Dr. Balakrishnan’s testimony:

**Q662. Do you have an opinion regarding the “system” limitation for the Verizon FiOS products?**

A662. [

]

CX-0003C at Q/A 662.

Dr. Balakrishnan has not sufficiently explained how the guide is implemented on the system/set-top box. Accordingly, the administrative law judge has determined that Rovi has not shown the Verizon products practice this limitation.

(d) *SuddenLink*

Rovi argues:

In the SuddenLink products, the interactive television program guide is implemented on the set-top box, which is user equipment, so there is no dispute that the “system” and “implemented on the system” requirements are met even under [Comcast’s] constructions. CX-0003C (Balakrishnan WS) at Q/A 680.

Rovi Br. at 181-82.

Comcast does not rebut this argument. *See generally* Resps. Br., Section IX(G)(4).

The administrative law judge has determined that the evidence shows that the SuddenLink products practice this limitation. *See* CX-0003C at Q/A 680-81.

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### *c) Claim 22*

Rovi jointly addresses claims 10 and 22 for the alleged domestic industry products. *See* Rovi Br., Section VI(J)(1). Comcast does not directly rebut Rovi's arguments about claim 22. *See generally* Resps. Br., Section IX(G); Resps. Reply, Section VII(G). Thus, the administrative law judge finds claim 22 is practiced by the i-Guide, Passport, and SuddenLink products for the same reasons claim 10 is practiced. The administrative law judge finds that Rovi has not shown the Verizon products practice claim 22 for the same reasons provided for claim 10.

### **7. Validity**

#### *a) Obviousness*

Comcast's expert analyzes the claims with alphanumeric references, as follows:

- [1a] 1. A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising:
  - [1b] receiving a request to perform a tuning operation;
  - [1c] determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and
  - [1d] in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

*See* RX-0004C (Bederson WS) at Q/A 116; JX-0006 at 18:35-47.

Claim 13 follows:

- [13a] 13. A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising:

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- [13b] a first tuner;
- [13c] a second tuner; and
- [13d] an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to:
- [13e] receive a request to perform a tuning operation;
- [13f] determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and
- [13g] in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

See RX-0004C (Bederson WS) at Q/A 116; JX-0006 at 19:41-59. Given the similarities between the claims (neither Rovi nor Comcast has pointed to material evidence that is specific to the system claim or the method claim), and because an analysis of claim 13 will cover all of the limitations of claim 1, the administrative law judge has discussed claim 13 only.

(1) *Sano (RX-0152) in combination with the general knowledge of a POSITA, and/or LaJoie (RX-0063), Prevue Guide (RX-0073), Alexander (RX-0155), Nagano (RX-0153), or Marsh (RX-0064)*

(a) *Limitations 13a-d*

Comcast argues, for limitations 13a-d, that

Sano teaches the use of a STB consisting of multiple tuners (“M tuners”), which is controlled by an IPG. RX-0004C (Bederson WS) at Q/A 123, 70-76. In particular, figures 4 and 5 of Sano shows the multiple tuners, which can be a “first tuner” and “second tuner.” *Id.* at 74-75. And, the STB is controlled by an electronic program guide. *Id.* at 73. This electronic program is located on the STB, as was conventional at the time of Sano, and therefore



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was located on user equipment as required under Respondents' construction of "an IPG on the system . . ."

Resps. Br. at 210.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(i).

The administrative law judge has determined that the evidence shows that Sano teaches these limitations. *See* RX-0004C (Bederson WS) at Q/A 70-76, 119-124.

### (b) *Limitation 13e*

Comcast's entire argument is "Sano teaches receiving a request for a tuning operation, such as watching a program or setting a recording. RX-0004C at Q/A 73." Resps. Br. at 210.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(i).

The administrative law judge has determined that the evidence shows that Sano teaches this limitation. *See* RX-0004C (Bederson WS) at Q/A 73 (citing RX-0152 at 11:42-51).

### (c) *Limitation 13f: "determining neither tuner is available"*

Comcast argues:

Sano teaches "determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation." In particular, Sano teaches that in the event the user attempts to set more recordings than there are tuners, a conflict results. As discussed below (next limitation), Sano further teaches providing an alert in the case of the conflict.

In addition, Sano teaches that all of the M tuners in the STB are capable of tuning to television program in the broadcast stream for recording. RX-0004C (Bederson WS) at Q/A 74-75. This satisfies the limitation requiring "wherein the first tuner and the second tuner are both capable of performing the tuning operation."

Resps. Br. at 210.

Rovi argues that "Sano only discloses timer conflicts and therefore does not" teach "determining that neither" tuner is available. Rovi Br. at 188.

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RX-0004C (Bederson WS) at Q/A 76 points to Sano at 12:53-63, which discusses determining that multiple tuners are unavailable. Sano teaches:

In the case of the digital broadcast recording and reproducing apparatus of FIG. 5, the number of channels that can be arbitrarily selected and simultaneously recorded is three. ***Therefore, if the number of channels more than three is set in the same time period in the timer recording setting, it is impossible to record all the set channels. Such a misoperation can be prevented by preparing so as to provide an alarm such as a beep tone or a warning display when the number of set channels exceed the maximum number of channels that can be simultaneously recorded in the timer recording setting.*** This alarm can be used also as a warning provided when the sum total of the times of all the set programs exceed the remaining time of the magnetic tape.

RX-0004C (Bederson WS) at Q/A 76 (emphasis provided by Dr. Bederson). The administrative law judge has determined that this evidence shows that Sano teaches this limitation. *See id.*

(d) *Limitation 13g: "displaying an alert" and "opportunity to cancel"*

Comcast argues:

Sano teaches that "in response to the determination, displaying an alert." RX-0004C (Bederson WS) at Q/A 76. In particular, in the event that a user attempts to record more programs than tuner, an alert such as a warning display is provided. *Id.* Sano does not explicitly teach an alert that "provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation." But this limitation is satisfied by each of the LaJoie, Alexander, Prevue Guide, and Nagano references, each of which teaches such as an alert. *Id.* at Q/A 44, 135, 303-304, 309.

In particular, the LaJoie reference teaches an alert screen that allows the user to cancel the function of a tuner, such as canceling a recording. *Id.* at Q/A 33, 43 (e.g., annotated Fig. 12); RX-0063 at Fig. 12. Similarly, Alexander teaches, in the case of a tuner conflict, an alert that allows the user to cancel a recording, or adjust the length of recording, to resolve the conflict. RX-0004C at Q/A 98; RX-0155 at 12:53-13:25. The Prevue Guide also teaches an alert upon detection of a conflict between two

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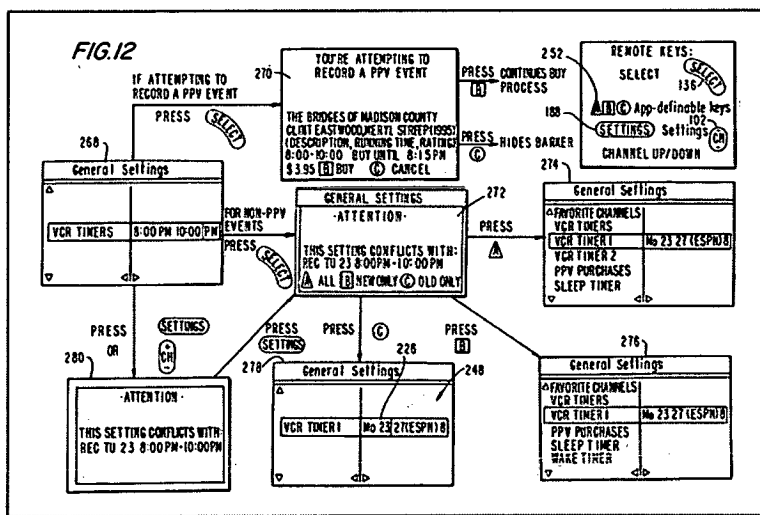
recordings; the alert asks the user “[w]ould you like to replace the prior recording with this new recording,” allowing the user to cancel one of the tuner operations to accommodate the new request. RX-0004C at Q/A 86; RX-0073C.0190. Nagano also detects a conflict between recordings (RX-0004C at Q/A 109), and provides an alert with a cursor that allows the user to adjust the recordings to resolve the conflict, and a “clear” key to cancel one of the recordings to resolve the conflict (*Id.* at Q/A 110-111); *see also* RX-0153 at 16a-c; 10:6-18.

Resps. Br. at 210-11.

Rovi argues that LaJoie, the Prevue Guide, Alexander, and Nagano teach “timer conflicts” rather than “tuner conflicts.” *See* Rovi Br. at 189-92.

The administrative law judge has determined that LaJoie, the Prevue Guide, Alexander, and Nagano each teach displaying an alert that provides the user with an opportunity to cancel a tuner function.

LaJoie teaches an alert (272, in Fig. 12) that allows the user to decide between new and old selections. *See* RX-0004C (Bederson WS) at Q/A 43; RX-0063 at Fig. 12. Dr. Bederson provided the following annotated figure:



*Id.*

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Alexander also teaches an alert that allows the user to decide between two selections. *See* RX-0004C (Bederson WS) at Q/A 98; RX-0115 at 12:53-13:25. In particular, in a section entitled, "Record Instruction Conflict Resolution," Alexander describes:

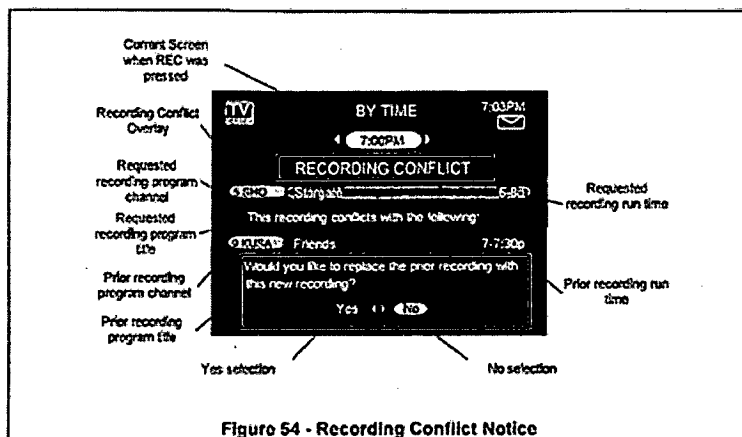
The EPG's Record Function recognizes conflicts in viewer record instructions. In one embodiment, the EPG's Record Function *prompts the viewer* to resolve the conflict. For instance, in the Record Function, the EPG would accept viewer instructions to record a particular program. The EPG compares the newly received record instruction *to as-yet incompletely executed, or as yet unexecuted, record instructions* in the Record List. If *the EPG detects an overlap* in date, time and duration between the newly received instruction on the one hand and one or more of the remaining record instructions in the Record List, the EPG formats a message to the viewer describing the conflict. The message describes to the user the newly received instruction to record a particular program and the conflicting record instructions in the Record List. In Record Function, the EPG will prevent entry of conflicting instructions into the Record List. *The EPG will require that the viewer revise the record instructions to eliminate the conflict.*

*See id.* (emphasis added).

The Prevue Guide also teaches an alert upon detection of a conflict between two recordings; the alert asks the user "[w]ould you like to replace the prior recording with this new recording," allowing the user to cancel one of the tuner operations to accommodate the new request. *See* RX-0004C (Bederson WS) at Q/A 86; RX-0073C.0190. This is an annotated figure from Dr. Bederson:

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### 3.10.6 Recording Conflict Notice



*Id.*

Nagano also detects a conflict between recordings, and displays an alert about that conflict, as shown by the flowchart in Fig. 13A. *See* RX-0004C (Bederson WS) at Q/A 109. Nagano, Figs. 15B 16A-C, and 17E, shows that the conflicted request can be cancelled. *Id.* at Q/A 110-11; RX-0153 at 10:6-18 (the “Clear Key” allows the user “to erase the picture recording reservation of the channel B.”).

The Marsh reference, RX-0064, is not discussed in the text of Comcast’s brief. *See generally* Resps. Br., Section IX(F)(2)(f) (the heading lists Marsh, but the reference is not discussed).

Comcast’s brief, however, does not contain any explanation of why a person of ordinary skill in the art would combine these references with Sano. *See generally* Resps. Br., Section IX(F)(2)(f). Its Reply—for all of its obviousness combinations—provides three sentences:

Rovi never addresses the most basic point. No matter how many tuners you have (*i.e.*,  $n$  tuners), a conflict will arise when you have one more request than the number of tuners (*i.e.*,  $n+1$  requests). RX-0004C (Bederson WS) at Q/A 303. This basic principal would lead any POSITA to combine Sano or Chun with each of the other conflict detection references (LaJoie, Prevue, Alexander, Nagano, Marsh). *Id.*

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Resps. Reply at 76. This is the cited testimony:

**Q303. Are there examples of these standard engineering techniques in the prior art?**

A303. Yes. For example, the determination of a conflict and provision of an alert message (*i.e.*, display), was a well-known technique. This was a well-known technique not only with respect to electronic program guides, as disclosed in the LaJoie, Nagano, Alexander, and Prevue Guide references, but also with respect to electronics and systems with displays, such as the Windows 95 operating system. Combining these techniques with the teaching of multiple tuners would yield predictable results. As discussed above, “determining a conflict” and “providing an alert” do not change in any material way as the number of tuners increases. Each tuner still has a conflict between two existing requests, and the provision of an alert requires the display of a picture to the screen in either the single or multiple tuner scenario. And although the claims as recited only require an alert, even the additional unrecited step of an actual resolution of the conflict (*i.e.*, allocation of the tuners), the solution is well understood, and will provide predictable results, because it is a basic math problem known to persons of ordinary skill in the art.

RX-0004C (Bederson WS) at Q/A 303. This testimony does not explain why a person of ordinary skill in the art would modify the primary reference, Sano, in the first place. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>151</sup>

Accordingly, the administrative law judge has determined that Comcast has not met its burden of showing that claim 13, as a whole, would have been obvious in view of the above references, because it has not provided a sufficient rationale for combining the references.

(e) *Claims 10 and 22*

Comcast argues:

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<sup>151</sup> See n.92, *supra*.

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Sano teaches “wherein the displaying the alert comprises displaying a display screen using the interactive television program guide.” RX-0004C (Bederson WS) at Q/A 76. In particular, in the event that a user attempts to record more programs than tuners, an alert such as a warning display is provided. *Id.* Sano does not explicitly teach an alert that “provides the user with a first option to continue to perform the function of the second tuner, and with a second option to cancel the function of the second tuner to perform the requested tuning operation.” But this limitation is satisfied by each of the LaJoie, Alexander, Prevue Guide, and Nagano references, each of which teaches such as an alert. *Id.* at Q/A 44, 135, 303-304, 309; *supra* § IX.F.2.f.iv (describing teachings of the combination references with respect to Element D of Claim 1 and Element G of Claim 13).

Resps. Br. at 211-12.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(i).

The administrative law judge has determined that the evidence shows that Sano teaches the subject matter of claims 10 and 22. *See* RX-0004C (Bederson WS) at Q/A 76, 135, 303-04, 309.

(2) *Prevue Guide (RX-0073) in combination with the general knowledge of a POSITA, and/or Sano (RX-0152) or Chun (RX-0158)*

For the Prevue Guide, Comcast argues:

The Prevue Guide was known before, and offered for sale more than one year before the priority date of the ‘512 patent, and qualifies as prior art under §§ 102(a) or 102(b). RX-0073C; RX-0004C at Q/A 87. In addition, the Prevue Guide was developed before the earliest priority date of the ‘512 patent and is prior art under § 102(g)(2). *Id.*

Resps. Br. at 209.

Rovi argues:

Respondents have not demonstrated by clear and convincing evidence that the Prevue Guide is prior art to the ‘512 Patent. Respondents rely on two pieces of evidence to attempt to demonstrate that the Prevue Guide is prior art to the ‘512 Patent:

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(1) Mr. Lemmons's deposition testimony from April 7, 1995 (RX-0646C (Lemmons Dep. Trans.) at 90:7-14); and (2) the alleged Prevue Guide product documentation, RX-0073C (TV Guide Prevue Networks Requirements Specification), which has a 1996 copyright date. RX-0004C (Bederson WS) at Q/A 88-89. Neither provides clear and convincing evidence that the Prevue Guide is prior art to the '512 patent. Mr. Lemmons's 1995 testimony does not establish what features the Prevue Guide had in 1995 and the 1996 documentation was explicitly a "confidential" document that Respondents have not proven was publicly known or available or published. Furthermore, it merely contains a set of requirements that Respondents have not demonstrated was used in any public implementation. CX-1902C (Balakrishnan RWS) at Q/A 108.

Rovi Br. at 190.

Comcast replies:

Rovi inexplicably argues that the 1995 testimony of Mr. Lemmons regarding the Prevue Guide *in 1995*, fails to establish the features of the Prevue Guide. Such contemporaneous testimony is highly probative. *CEATS, Inc. v. Continental Airlines, Inc.*, 526 Fed. App'x 966, 971 ("[d]ocumentary or physical evidence that is made contemporaneously with the inventive process provides the most reliable proof that the inventor's testimony has been corroborated") (citation omitted). Mr. Lemmons testimony from 1995, when the salient features of Prevue were implemented in the Full Service Network in Orlando establishes the Prevue Guide as prior art. RX-0004C (Bederson WS) at Q/A 82. The 1996 documentation, which was authored in part by the lead named inventor of the '512 patent, details functionality fully consistent with Mr. Lemmons' testimony and is fully corroborative. *Id.* at Q/A 80-86.

Resps. Reply at 75.

Rovi replies that "Respondents' citation to Dr. Bederson's conclusion is irrelevant; Dr. Bederson's unsupported conclusion regarding the legal issue of whether a reference or use constitutes prior art is not based on his expert opinion and is not based on any personal knowledge." Rovi Reply at 70.

The administrative law judge has determined that Comcast has not shown, through clear and convincing evidence, that the Prevue Guide (as represented in RX-0073) is prior art.



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This is the portion of Dr. Bederson's testimony that Comcast cites:

### **Q87. Is the Prevue Guide prior art to the '512 patent?**

A87. Yes. I understand that the Prevue Guide qualifies as prior art to the '512 patent at least under 35 U.S.C. § 102(g)(2). The Prevue Guide, along with its salient features, as documented, was also offered for sale, and should be prior art under 35 U.S.C. § 102(a) or (b). This all occurred in the 1995 to 1996 timeframe, before June 16, 1998, which is the earliest effective filing date Rovi has claimed for any asserted claim of the '512 patent.

RX-0004C (Bederson WS) at Q/A 87. This testimony is conclusory, is not based on personal knowledge, and does not implicate the specialized knowledge that qualified Dr. Bederson as an expert. *See, e.g.*, RX-0004C (Bederson WS) at Q/A 10-15 (discussing expert qualifications). Further, Comcast does not explain how Mr. Lemmons's 1995 testimony (from a different legal matter) supports its claim that a document from 1996 was publically available, particularly where the document is labeled "Confidential" in the footer and indicates it was created in May 1996 (thus post-dating the 1995 testimony). *See* RX-0073C at 11 (the earliest date associated with the document is May 27, 1996). Further, Comcast has not cited evidence such as sales receipts or purchase orders of the Prevue Guide.

Accordingly, Comcast has not shown that the Prevue Guide is prior art. However, in the event that it is determined the Prevue Guide is prior art, the administrative law judge has analyzed Comcast's argument below.

#### *(a) Limitations 13a-d*

Comcast argues that the Prevue Guide teaches limitations 13a, 13b, and 13d; it relies on Sano or Chun to teach multiple tuners, limitation 13c. Resps. Br. at 212.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(ii) (arguing that Prevue does not teach multiple tuners), Section VI(K)(3)(b)(i) (arguing that Sano

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does not teach tuner conflicts and the required alert); Rovi Reply, Section I(2)(c)(ii) (Rovi disputes the motivation to combine).

The administrative law judge has determined that the evidence shows that Prevue and Sano teach these limitations. *See* RX-0004C (Bederson WS) at Q/A 74-75 (Sano), 78-79, 81-82, 86, 168.

### (b) *Limitation 13e*

Comcast argues:

The Prevue Guide teaches “receiving a request for a tuning operation,” such as watching a program or setting a recording. RX-0004C (Bederson WS) at Q/A 81.

Resps. Br. at 213.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(ii).

The administrative law judge has determined that the evidence shows that Prevue Guide teaches this limitation. *See* RX-0004C (Bederson WS) at Q/A 81.

### (c) *Limitation 13f*

Comcast argues:

The Prevue Guide recognized conflicts between the channels currently being used by the user, and previously set viewings or recordings, determining when a tuner conflict occurs. RX-0004C (Bederson WS) at Q/A 82. The conflict detection system of the Prevue Guide could have easily been modified by a POSITA to operate in a STB with “a first tuner” and “a second tuner,” or multiple tuners. *Id.* at Q/A 83-85; *supra* § IX.F.2.g.i (discussing modification to multi-tuner system with respect to Element A). Even if this were not the case, it would have been obvious to a POSITA to combine the teachings of Prevue Guide with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “first tuner” and a “second tuner.” RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine). In addition, Sano teaches that all of the M tuners in the STB are capable of tuning to television program in the broadcast stream for recording. *Id.* at Q/A 74-

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75. This satisfies the limitation requiring “wherein the first tuner and the second tuner are both capable of performing the tuning operation.”

Resps. Br. at 213.

Rovi argues that Prevue does not teach a second tuner and that it discloses timer conflicts, not tuner conflicts. Rovi Br. at 189 (citing CX-1902C (Balakrishnan RWS) at Q/A 117); *see also* Rovi Reply at 71. This is Dr. Balakrishnan’s testimony:

**Q117. What limitation or limitations of the asserted claims of the ‘512 patent are missing in the Prevue Guide?**

All7. The Prevue Guide is missing all of the limitations of the asserted claims of the ‘512 patent.

The claims require multiple tuners, which the Prevue Guide lacks. Thus, the Prevue Guide cannot meet the requirement of “determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation,” cannot meet the requirement of displaying an alert “in response to the determination,” and cannot meet the requirement of “displaying an alert that provides the user with the opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.”

Further, the Prevue Guide did not detect “tuning conflicts” based on requests for a tuning operation. Instead, the Prevue Guide detects conflicts based on prior timer settings.

By disclosing only a single tuner capable of performing a tuning operation, the Prevue Guide is similar to LaJoie, which also disclosed only a single tuner capable of performing a tuning operation and which did not detect tuning operation conflicts. The examiner found the claims of the ‘512 patent to be patentable over LaJoie in view of Kim and Lee, which did disclose two tuners.

CX-1902C (Balakrishnan RWS) at Q/A 117.

Dr. Bederson testified that the Prevue Guide recognized tuner conflicts and that a person of ordinary skill knew of multiple tuners, would have been able to modify Prevue to accommodate multiple tuners, and that the modification would not have been complicated. *See*

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RX-0004C (Bederson WS) at Q/A 82-86, 135, 302, 307, and 309. Indeed, one of ordinary skill in the art would have needed to modify Prevue when porting it on a set-top box with multiple tuners.

The administrative law judge has determined that the evidence shows that a person of ordinary skill would have been able to modify Prevue for a two-tuner set-top box, such that Prevue and Sano teach and satisfy this limitation. *See* RX-0004C (Bederson WS) at Q/A 82-86, 135, 302, 307, and 309.

### (d) *Limitation 13g*

Comcast argues, in pertinent part, that “[t]he conflict resolution system of the Prevue Guide could have easily been modified by a POSITA to operate in a STB with ‘a second tuner,’ or multiple tuners.” Resps. Br. at 214. Comcast then cites its earlier arguments about Prevue and multi-tuner systems. *See id.* Comcast relies upon the same evidence it relied upon for limitation 13f.

Rovi has argued that Prevue do not teach cancelling “a function of the second tuner” as part of its omnibus argument for Comcast’s arguments involving Prevue as a primary reference. Rovi Br. at 190. Rovi has not cited any evidence beyond CX-1902C (Balakrishnan RWS) at Q/A 117, which is copied above.

The administrative law judge has determined that the evidence shows that a person of ordinary skill would have been able to modify Prevue for a two-tuner set-top box, and that the person of ordinary skill would have needed to make the modification when porting Prevue to a two-tuner set-top box, such that Prevue and Sano teach and satisfy this limitation. *See* RX-0004C (Bederson WS) at Q/A 82-86, 135, 302, 307, and 309. In particular, the administrative

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law judge finds that it would have taken only ordinary skill to modify Prevue's alert to cancel a function of the second tuner. *Id.* at Q/A 85.

Accordingly, if Prevue is found to be prior art—which the administrative law judge previously determined it was not—then the administrative law judge has determined that claim 13 would have been obvious over Prevue in light of Sano. Further, inasmuch as the parties did not present separate arguments for claim 1, the administrative law judge has also determined that claim 1 would have been obvious over Prevue in light of Sano.

### (e) Claims 10 and 22

Comcast argues, in pertinent part, that:

When a conflict has been detected, the Prevue Guide teaches “displaying a display screen using the interactive program guide that provides the user with a first option to continue to perform the function of the [ ] tuner, and with a second option to cancel the function of the [ ] tuner to perform the requested tuning operation.” In order to resolve a potential conflict, the Prevue Guide displays to the user the option of either continuing to watch the present program or maintaining the previously set viewing/recording. *Id.* RX-0004C (Bederson WS) at Q/A 82. The commercial documentation of the Prevue Guide made clear that such conflict resolution was performed through a user screen and in response to user inputs. RX-0004C (Bederson WS) at Q/A 82; RX-0073C (Prevue Guide Documentation) at .0190 (screen stated “[w]ould you like to replace the prior recording with this new recording,” allowing the user to cancel one of the tuner operations to accommodate the new request).

The conflict resolution system of the Prevue Guide could have easily been modified by a POSITA to operate in a STB with “a second tuner,” or multiple tuners. *Id.* at Q/A 83-85; *supra* § IX.F.2.g.i (discussing modification to multi-tuner system with respect to Element A). Even if this were not the case, it would have been obvious to a POSITA to combine the teachings of the Prevue Guide with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “second tuner.” RX-0004C (Bederson WS) at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine).

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Resps. Br. at 211-12.

The testimony that Comcast cites does not clearly address claim 10 or 22. Accordingly, the administrative law judge has determined that Comcast has not met its burden of showing claims 10 and 22 would have been obvious to a person having ordinary skill in the art.

(3) *Alexander (RX-0155) in combination with the general knowledge of a POSITA, or in combination with Sano (RX-0152) or Chun (RX-0158), or in further combination with the Prevue Guide (RX-0073) or Nagano (RX-0153)*

(a) *Limitations 13a-d*

Comcast argues:

Alexander teaches the use of an IPG used on STBs, which can be used to control the scheduling and recording of programs. RX-0004C (Bederson WS) at Q/A 95-97, 102. Using the IPG, Alexander teaches that tuner conflicts can be detected, displayed to the user, and then resolved through instructions from the user to, e.g., revise the record instructions to eliminate the conflict. *Id.* at Q/A 98. In addition, Alexander taught the use of a first tuner and a second tuner within the STB. *Id.* at Q/A 99-102. However, to the extent that the second tuner of Alexander is only used for picture-in-picture viewing, it would have been obvious to combine the teachings of Alexander with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “second tuner.” *Id.* at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine). In addition, Alexander could further be combined with the conflict resolution systems of the Prevue Guide or Nagano, each of which teach conflict resolution system. *Id.* at Q/A 77-89 (the Prevue Guide); 103-111 (Nagano); 303-304, 309 (motivations to combine).

Resps. Br. at 215.

Rovi argues that Alexander lacks multiple tuners and tuner conflicts. Rovi Br. at 190. Rovi notes that one of the two tuners in Alexander was for picture-in-picture service. *Id.* Rovi further challenges Comcast’s contention that one of ordinary skill in the art would have been motivated to combine the references. *Id.* at 193-94.

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The administrative law judge has determined that Alexander does not teach two tuners, as described and claimed in the '512 Patent. It is not clear that the second tuner described in Alexander was capable of “performing [a] tuning operation,” such as recording a show. Further, Comcast has not shown, through clear and convincing evidence, that one of ordinary skill in the art would have combined the references as Comcast now asserts. As an initial matter, the testimony that Comcast cites, *e.g.*, RX-0004C (Bederson WS) at Q/A 95-102, 303-304, 309 does not clearly address combinations involving Alexander. For instance, Q/A 95-102 reproduce excerpts from Alexander, Q/A 74-74 and 114 are background questions on Sano and Chun (Alexander is never mentioned), and Q/A 302, 307, and 309 are generic answers to questions about combining all of “the various references discussed” (*see* Q/A 298). A combination involving Alexander is not discussed in this testimony. Accordingly, the testimony does not explain why a person of ordinary skill in the art would modify the primary reference, Alexander, in the first place. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>152</sup>

Consequently, the administrative law judge has determined that Comcast has not met its burden of showing that claim 13, as a whole, would have been obvious in view of the above references, because it has not provided a sufficient rationale for combining the references.

### (b) *Limitation 13e*

Comcast argues:

Alexander teaches an IPG on a STB to receiving a request for a tuning operation, such as displaying or recording a programming. RX-0004C (Bederson WS) at Q/A 95-97.

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<sup>152</sup> *See* n.92, *supra*.

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Resps. Br. at 216.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(iii).

The administrative law judge has determined that the evidence shows that Alexander teaches this limitation. *See* RX-0004C (Bederson WS) at Q/A 95-97.

(c) *Limitation 13f*

Comcast argues:

Alexander teaches the determination of tuner conflicts through its electronic program guide, which recognizes conflicts between recordings set by the user. RX-0004C (Bederson WS) at Q/A 98. While Alexander does not specifically teach “determining that neither a first tuner or a second tuner are available...” it would have been obvious to a POSITA to modify the conflict detection system of Alexander to a STB with “a first tuner” and “a second tuner,” or multiple tuners, all capable of “perform[ing] the requested tuning operation.” *Id.* at Q/A 219. Even if this were not the case, it would have been obvious to a POSITA to combine the teachings of Alexander with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “first tuner” and a “second tuner.” RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine). In addition, Sano teaches that all of the M tuners in the STB are capable of tuning to television program in the broadcast stream for recording. RX-0004C at Q/A 74-75. This satisfies the limitation requiring “wherein the first tuner and the second tuner are both capable of performing the tuning operation.”

Resps. Br. at 216. Dr. Bederson’s testimony at Q/A 219 follows:

**Q218. Let me direct your attention to the element [c] of claim 1. Did you form an opinion as to whether the “determining that neither a first tuner nor second tuner are available” where “both tuners are capable of performing the function” limitation is met by Alexander?**

A218. Yes.

**Q219. What is your opinion in this regard?**

A219. It is my opinion that Alexander renders obvious the requirements of this limitation.



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As I have previously testified in response to QUESTIONS 90-102, Alexander teaches a multi-tuner system that performs tuning operations in a system for receiving and recording broadcast programs. Alexander teaches two tuners to receive and display a first video and a picture-in-picture video. Alexander also incorporates by reference WO 96/07270 which states that two tuners are required to provide the disclosed picture-in-picture feature. To the extent that the PIP tuner is not a “second tuner,” it would have been obvious to one of ordinary skill in the art to modify the teachings of Alexander to incorporate a “first tuner” and a “second tuner.” ***One of ordinary skill in the art would have also know that the system of Alexander could be combined with a system that used multiple tuners, such as Sano or Chun.*** In addition, Alexander teaches an interactive program guide which recognizes conflicts and provides an alert to the user.

RX-0004C (Bederson WS) at Q/A 218-19 (emphasis added on relevant portion). This testimony is conclusory and does not explain why a person of ordinary skill in the art would modify the primary reference, Alexander, in the first place. *See Plantronics*, 724 F.3d at 1354 (“Where, as here, the necessary reasoning is absent, we cannot simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’”).<sup>153</sup>

Accordingly, the administrative law judge has determined that Comcast has not met its burden of showing that claim 13, as a whole, would have been obvious in view of the above references, because it has not provided a sufficient rationale for combining the references.

### (d) Limitation 13g

Comcast argues that this limitation is met based upon the evidence cited for limitations 13a-f. *See* Resps. Br. at 216-17 (citing RX-0004C (Bederson WS) at Q/A 97-98, 219, 74-75, 114, 302, 307, 309). Comcast then argues that it would have been obvious for a person of ordinary skill to further combine the Prevue Guide or Nagano to satisfy this limitation. *Id.* at 217 (citing RX-0004C (Bederson WS) at Q/A 222). Dr. Bederson testified:

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<sup>153</sup> *See* n.92, *supra*.

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**Q221. Let me direct your attention to element [d] of claim 1. Did you form an opinion as to whether the “displaying an alert” that “provides an opportunity to direct the interactive television program to cancel a function of the second tuner” limitation is met by Alexander?**

A221. Yes.

**Q222. What is your opinion in this regard?**

A222. It is my opinion that Alexander renders obvious element [d] of the ‘512 patent. Alexander teaches that when a conflict is detected, the system will provide a warning to the user and provides the ability to resolve the conflict. Additionally, one of ordinary skill in the art would understand that the teachings of Alexander could be combined with either the teachings of the Prevue Guide or Nagano, which disclose the resolution of tuner conflicts.

Dr. Bederson’s testimony that the references “could be” combined does not explain why one of ordinary skill in the art would combine them.

Accordingly, the administrative law judge has determined that Comcast has not met its burden of showing that claim 13, as a whole, would have been obvious in view of the above references, because it has not provided a sufficient rationale for combining the references.

(e) *Claims 10 and 22*

Comcast argues:

When a conflict has been detected, Alexander teaches “displaying a display screen using the interactive program guide that provides the user with a first option to continue to perform the function of the [] tuner, and with a second option to cancel the function of the [] tuner to perform the requested tuning operation.” RX-0004C (Bederson WS) at 97-98; *supra* IX.F.2.h.iv. The conflict resolution system of Alexander could have easily been modified by a POSITA to operate in a STB with “a second tuner,” or multiple tuners. *Id.* at Q/A 219. Even if this were not the case, it would have been obvious to a POSITA to combine the teachings of Alexander with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “second tuner”. RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine). Further, if Alexander’s teachings of

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resolving recording conflicts are insufficient to meet the conflict resolution aspect of this limitation, it would have been obvious to a POSITA to further combine the teachings of Alexander with the teachings of the Prevue Guide or Nagano, thereby satisfying this limitation. *Id.* at 222; *supra* IX.F.2.h.iv.

Resps. Br. at 217-18.

The administrative law judge has determined that Comcast has not met its burden of showing claims 10 and 22 would have been obvious through clear and convincing evidence. The cited testimony does not address either claim.

(4) *Nagano (RX-0153) in combination with the general knowledge of a POSITA, and/or Sano (RX-0152) or Chun (RX-0158)*

(a) *Limitations 13a-d*

Comcast argues:

Nagano teaches the use of an IPG running on an STB and conflict resolution when overlapping recordings are set, offering an alert to the user that allows canceling one of recordings to resolve the conflict. RX-0004C at Q/A 258; 106-111. In particular, Nagano taught the detection of conflicts between set recordings (*id.* at Q/A 109), and when a conflict or recording was detected, Nagano would provide a cancel option to cancel a recording, and a cursor to change the ending times of overlapping programs, either of which would resolve the conflict. *Id.* at Q/A 110-111.

Nagano does not explicitly disclose or teach the use of multiple tuners within the STB. However, it would have been obvious to a POSITA to utilize the IPG of Nagano in a STB with multiple tuners. *Id.* at Q/A 107, 83-85. Also, it would have been obvious to a POSITA to combine the teachings of the Prevue Guide with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “first tuner” and a “second tuner.” RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine).

Resps. Br. at 218.

Rovi argues:

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... (1) Nagano has only a single tuner and therefore does not meet the requirement of a “first tuner” and a “second tuner” (and all other requirements that refer to the second tuner); and (2) Nagano only discloses timer conflicts and therefore does not meet the limitation of “determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation” or “cancel a function of the second tuner.” CX-1902C (Balakrishnan RWS) at Q/A 130-34; Section VI(K)(3)(a), *supra*.

In Nagano, if a user “reserves” the tuner to record two programs being broadcast at the same time, then Nagano teaches methods for resolving that conflict involving a single tuner using cursors to change start and end times of recordings to eliminate overlaps and therefore eliminate timing conflicts. CX-1902C (Balakrishnan RWS) at Q/A 130.

Like LaJoie, Nagano thus discloses only a single tuner capable of performing a tuning operation. *Id.* at Q/A 134. The examiner found the claims of the ‘512 Patent patentable over LaJoie in view of Kim and Lee, which disclosed two tuners. *Id.* Again, the claims of the ‘512 Patent are similarly patentable over Nagano.

Rovi Br. at 192.

The administrative law judge finds that Nagano and Sano (or Chun) teach limitations 13a-d. Nagano teaches an interactive guide, while Sano (or Chun) teaches a set-top box with two tuners. *See* RX-0004C (Bederson WS) at Q/A 258, 103-11, 83, 114.

Nagano teaches an interactive guide in the abstract, specification, and figures. In the abstract, Nagano discloses a guide that allows a user to set recordings:

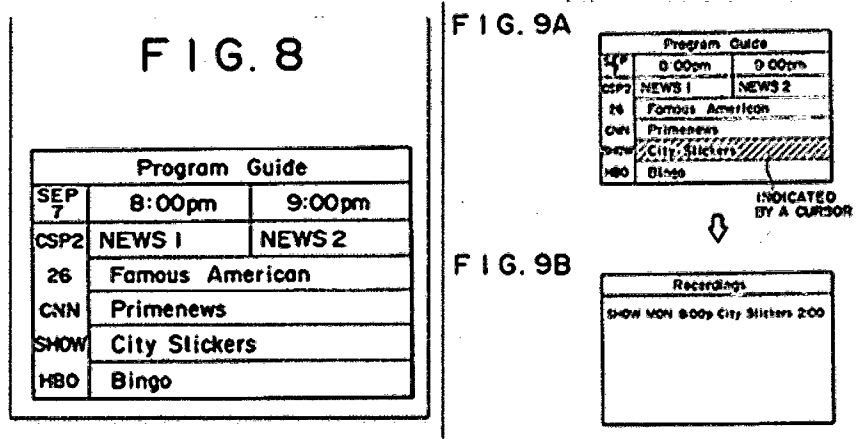
An apparatus and a method for controlling the recording of television programs are disclosed. The apparatus displays electronic program guide information superposed on a television signal. ***The apparatus allows a plurality of desired programs to be reserved for recording based on the electronic program guide information.*** If any of the reserved programs overlap, the apparatus allows the starting time and/or ending time of any of the overlapped programs to be changed. The apparatus may permit a program to be reserved for recording by inputting recording time and recording channel. If a program reserved for recording based on the electronic program guide information overlaps a program reserved for recording by inputting recording time and recording

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channel, a preferential setting enables one of the overlapped programs to be recorded. The apparatus advantageously causes an icon to be continuously displayed on a television screen in connection with the television picture signal when a program is reserved for recording. A corresponding method is described.

RX-0153 at Abstract (emphasis added); *id.* at 1:55-2<sup>9</sup> (“When the program to be recorded is displayed on the screen, a cursor is moved to the row of the program to be recorded by operating the cursor moving key. . . by pushing the program reservation button (Rec key) in this condition, the recording of this program is reserved.”); RX-0004C (Bederson WS) at Q/A 105, 108.

Nagano refers to Figures 8, 9A, and 9B to depict a program guide and steps for using that guide. Figures 8, 9A, and 9B follow:



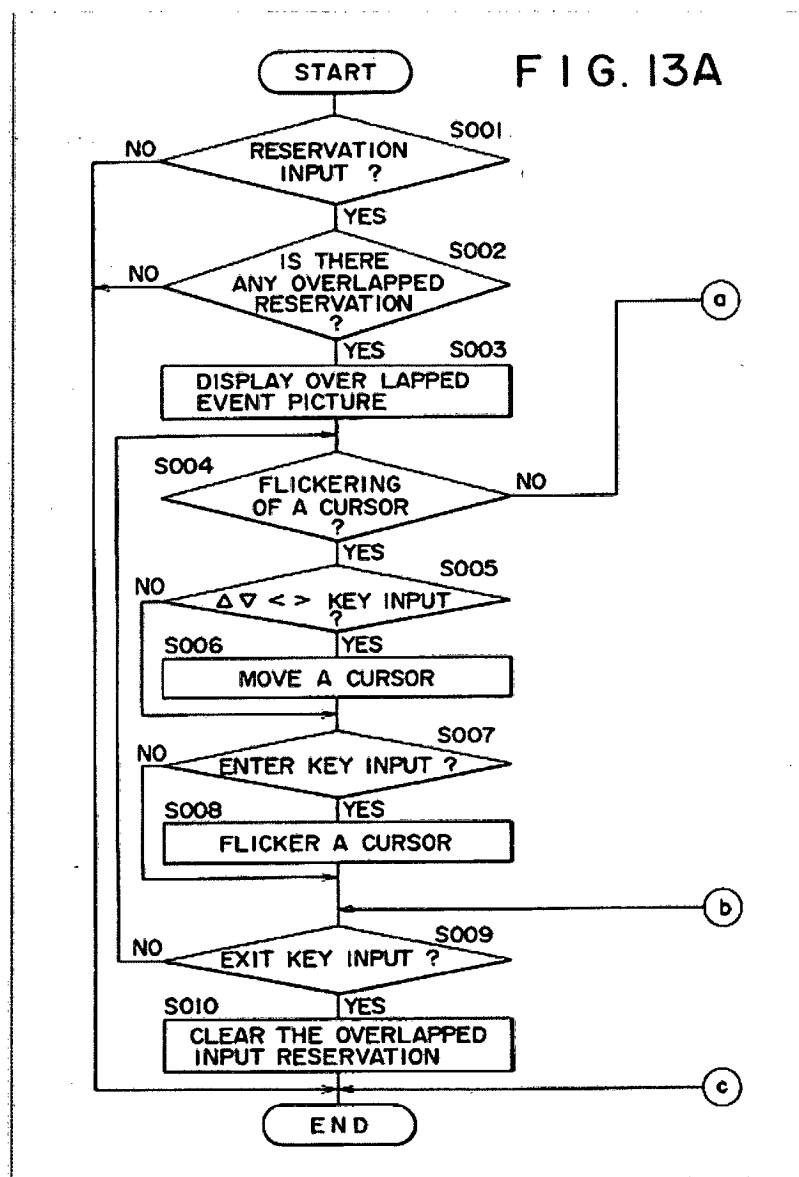
The specification explains that:

FIG. 8 is a diagram for illustrating a menu picture of the electronic program guide.

FIG. 9 is a set of diagram for illustrating a picture display of a method for program reservation using the electronic program guide.

RX-0153 at 5:54-58 (Figs. 15-17 provide additional guide-screen examples).

Further, Figure 13A is a flowchart for interacting with the guide:



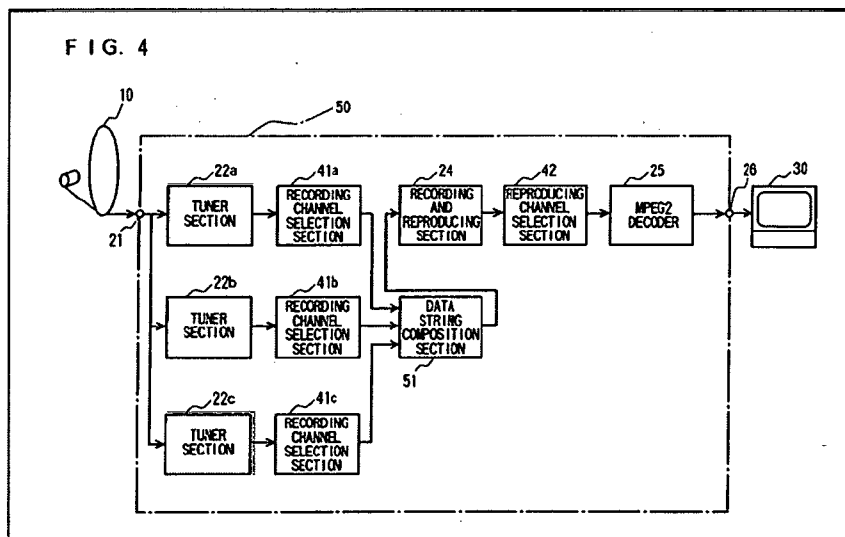
RX-0153 at 12. The specification explains that “FIG. 13 is a flowchart for illustrating the processing when program reservation by the first reservation means in accordance with the embodiment of the present invention overlaps.” *Id.* at 6:5-8. Accordingly, Nagano teaches the interactive guide that satisfies limitations 13a-d.

Sano teaches a set-top box with two tuners. Dr. Bederson explained:

A74 Sano teaches the use of multiple tuners, which can simultaneously receive and record multiple broadcast channels.

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Fig. 4 of Sano show one example of this utilizing three tuners to receive and record broadcast signals:



[Sano at Fig. 4 (annotations added)]

Col. 10:21-29: "To solve such a problem, in the embodiment shown in FIG. 4, by providing a plurality of tuner sections 22 and recording channel selection sections 41, it was enabled to record a plurality of programs arbitrarily selected from multi-channel multiplex broadcasts by a plurality of transponders. FIG. 4 is a view showing a system configuration including a digital broadcast recording and reproducing apparatus 50 according to the third embodiment of the present invention."

In fact, Dr. Balakrishnan agrees that Sano teaches multiple tuners. See Balakrishnan 10/29/16 Dep. Tr. 257:11-14.

RX-0004C (Bederson WS) at Q/A 74. As Figure 4 shows, Sano teaches three tuners, which satisfies the first and second tuner requirements of limitations 13a-d.

Chun also teaches two tuners. Dr. Bederson explained:

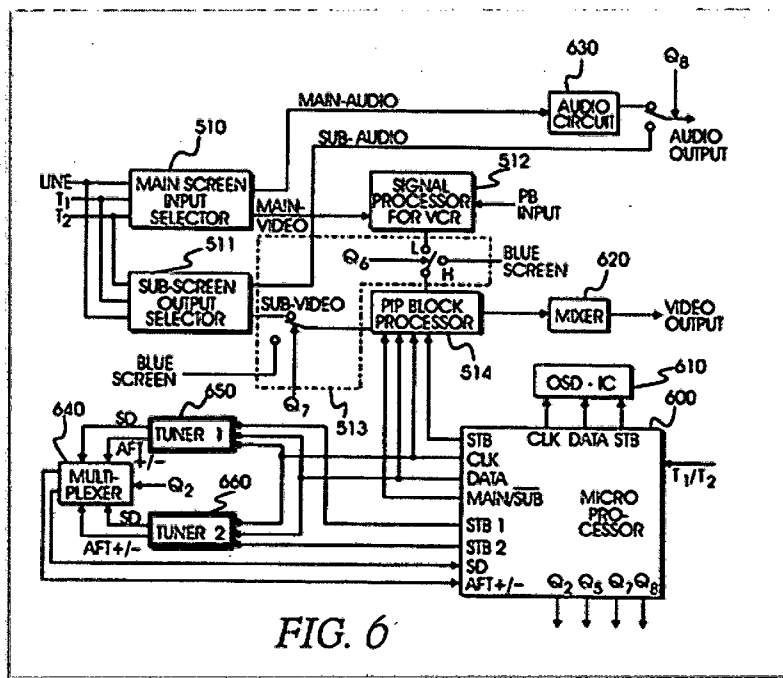
Chun generally discloses the use of two tuners, both of which were capable of tuning broadcast television for display. One tuner could be used for primary video, and a second tuner could be used for picture-in-picture, and each tuner could be used for either of these purposes.

Abstract: "A menu type multi-channel display system utilizing picture-in-picture (PIP) function and a page up/down mode. The

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present invention first comprises a first and second tuner to receive broadcasting signals and to output each of the broadcasting signals on a channel....”

Further, Chun provided for two tuners for use in tuning television signals for display.



[Chun at Fig. 6 (annotations added)]

1:32-57: “The invention provides a menu-type multi-channel video display system with page up/down mode comprising . . . a television tuner circuit, a VCR signal processing circuit, a switching circuit, a PIP processing circuit, an input selector for the main screen, an output selector for the sub-screen, a microcomputer, an on-screen display integrated circuit (OSDIC), a mixer, an audio circuit, two tuners, and a multiplexer.”

As Figure 6 shows, Chun teaches two tuners, which satisfies the first and second tuner requirements of limitations 13a-d. Given the overlap between the teachings of Sano and Chun, as presented by Comcast, the administrative law judge finds that Chun is cumulative of Sano’s disclosure.



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### (b) *Limitation 13e*

Comcast argues:

Nagano teaches “receiving a request for a tuning operation,” such as using a tuner to display and record broadcast programs. RX-0004C (Bederson WS) at Q/A 105-107.

Resps. Br. at 218-19.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(iv).

The administrative law judge has determined that the evidence shows that Nagano teaches this limitation. *See* RX-0004C (Bederson WS) at Q/A 105-07, 260.

### (c) *Limitation 13f*

Comcast argues:

Nagano detects conflicts between recordings and also determines if there are overlaps between recordings. RX-0004C (Bederson WS) at Q/A 109-110. The conflict detection system of the Nagano could have easily been modified by a POSITA to operate in a STB with “a first tuner” and “a second tuner,” or multiple tuners. *Id.* at Q/A 107, 83-85. It also would have been obvious to a POSITA to combine the teachings of the Nagano with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “first tuner” and a “second tuner.” RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine). In addition, Sano teaches that all of the M tuners in the STB are capable of tuning to television program in the broadcast stream for recording. RX-0004C at Q/A 74-75. This satisfies the limitation requiring “wherein the first tuner and the second tuner are both capable of performing the tuning operation” which the examiner found missing during prosecution.

Resps. Br. at 219.

Rovi does not address Comcast’s argument that Sano teaches the second tuner. *See generally* Rovi Br., Section VI(K)(3)(b).

Dr. Bederson testified that Nagano (and the Prevue Guide) recognized tuner conflicts, and that a person of ordinary skill knew of multiple tuners, would have been able to modify

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Nagano (and Prevue) to accommodate multiple tuners, and that the modification would not have been complicated. *See* RX-0004C (Bederson WS) at Q/A 107, 82-86, 302, 307, and 309.

Indeed, one of ordinary skill in the art would have needed to modify Nagano when porting it on a set-top box with multiple tuners.

The administrative law judge has determined that the evidence shows that a person of ordinary skill would have been able to modify Nagano for a two-tuner set-top box, such that Nagano and Sano teach and satisfy this limitation. *See* RX-0004C (Bederson WS) at Q/A 107, 82-86, 302, 307, and 309.

### (d) *Limitation 13g*

Comcast argues:

When a conflict is detected, Nagano, “display[s] an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the [] tuner to permit the [] tuner to perform the requested tuning operation.” In order to resolve a potential conflict, Nagano uses the IPG to display the overlapped display picture, and provides the ability to cancel a recording. R-0004C at Q/A 110-111. Nagano teaches that the user can cancel a function of the tuner (*i.e.*, cancel a portion of the recording) of either the first overlapping program (*e.g.*, change the ending time of the first recorded program) or second overlapping program (*e.g.*, change the starting time of the second recorded program). *Id.* at Q/A 111.

Nagano could have easily been modified by a POSITA to operate in a STB with multiple tuners. *Id.* at Q/A 107, 83-85. It would have also been obvious to a POSITA to combine the teachings of the Nagano with the teachings of Sano or Chun, which teach multiple tuners within a STB. RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine).

Resps. Br. at

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Rovi argues this combination does not satisfy the limitation, as combining Nagano and Sano would eliminate “the very problem that Nagano sought to solve with his invention.” *See* CX-1902C (Balakrishnan RWS) at Q/A 131; *see also* Rovi Br. at 192.

The administrative law judge has determined that the evidence shows that a person of ordinary skill would have been able to modify Nagano for a two-tuner set-top box, such that Nagano and Sano teach and satisfy this limitation. *See* RX-0004C (Bederson WS) at Q/A 107, 110-11, 82-86, 135, 74-75, 302, 307, and 309. In particular, the administrative law judge finds that it would have taken only ordinary skill to modify Nagano’s alert to cancel a function of the second tuner. *Id.* The combination would not eliminate Nagano’s solution to managing limited tuner resources, as the combination would still have a finite number of tuners. Accordingly, the administrative law judge finds that the combination would not eliminate “the very problem that Nagano sought to solve” and the combination of Nagano and Sato teaches limitation 13g.

### (e) Claims 10 and 22

Comcast argues:

When a conflict has been detected, Nagano teaches “displaying a display screen using the IPG that provides the user with a first option to continue to perform the function of the [] tuner, and with a second option to cancel the function of the [] tuner to perform the requested tuning operation.” To resolve a conflict, Nagano uses the IPG to display the overlapped recording events, and provides a cursor to cancel a portion of either recording, and a cancel key to cancel a recording request. RX-0004C (Bederson WS) at Q/A 110-111; *supra* IX.F.2.i.iv. As discussed above, the conflict resolution system of Nagano could have easily been modified by a POSITA to operate in a STB with “a second tuner,” or multiple tuners. *Id.* at Q/A 107, 83-85. In the alternative, it would have been obvious to a POSITA to combine the teachings of Nagano with the teachings of Sano or Chun, each which teach the use of multiple tuners within a STB, including a “second tuner.” RX-0004C at Q/A 74-75 (Sano), 114 (Chun), 302, 307, 309 (motivations to combine).

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Resps. Br. at 211-12.

Rovi does not rebut this argument. *See generally* Rovi Br., Section VI(K)(3)(b)(iv).

The administrative law judge has determined that the evidence shows that Sano teaches the subject matter of claims 10 and 22. *See* RX-0004C (Bederson WS) at Q/A 107, 110-11, 82-86, 135, 74-75, 302, 307, and 309.

### (5) *Secondary Considerations*

Comcast argues:

Rovi has not demonstrated any secondary considerations of non-obviousness with a nexus to the '512 patent. RX-0004C at Q/A 310-311. There is no particular indication of commercial success or long felt need, and in fact Rovi declined to expand the Prevue Guide to multi-tuner STBs because such STBs were not widely distributed due to cost. *Id.* at Q/A 17. The simultaneous creation by many others of systems to resolve conflicts, including in multi-tuner STBs, further underscores the obviousness of the '512 claims. *Id.* at Q/A 315. There is no praise by others or skepticism identified by Rovi specific to the '512 patent. *Id.* at Q/A 316-317. Rovi cannot identify any teaching away, recognition of a unique problem, or unexpected results either; the claims of the '512 simply call for use of well-known concepts to address a well-understood problem to achieve an obvious result. *Id.* at Q/A 318-320.

Resps. Br. at 220.

Rovi argues that the '512 Patent was a commercial success, due to Rovi's licensing program, and that the '512 Patent satisfied a long-felt need. Rovi Br. at 194-96. Rovi's arguments are addressed below.

### (a) *Licensing Success*

Rovi argues:

. . . As discussed in Section V(H)(3), *supra*, Rovi's licensing program has been tremendously successful. [

CX-0001C (Armaly WS) at Q/A 58.]

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... The importance of the '512 Patent to Rovi's licensing program is illustrated by the number of negotiations in which it was presented, and importantly, the particular licensees to whom it was presented. CX-1905C (Putnam RWS) at Q/A 156. [

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Rovi Br. at 194-95 (introductory headings omitted).

The Federal Circuit specifically requires “affirmative evidence of nexus where the evidence of commercial success presented is a license, because it is often cheaper to take licenses than to defend infringement suits.” *In re Cree*, 818 F.3d at 703 (quotations omitted). The Federal Circuit explained that

When the specific licenses are not in the record, it is difficult for the court to determine if “the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons.”

*Id.* (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1294 (Fed. Cir. 2012)).<sup>154</sup> In general, the existence of a license alone is insufficient to show that the licensed patent was a commercial

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<sup>154</sup> In *Antor Media*, 689 F.3d at 1294, the Federal Circuit criticized evidentiary support that is similar to the present investigation:

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success. *See Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (“Without a showing of nexus, “the mere existence of ... licenses is insufficient to overcome the conclusion of obviousness” when there is a strong *prima facie* case of obviousness.”); *see also Amazon.com*, 2016 WL 1170773 at \*17 (“Mr. Holtzman’s testimony lists patent family licenses and revenue, but does not discuss the merits of the challenged claim as they relate to any particular license for the ‘956 patent in the portfolio of licenses. . . . [this] does not establish whether a specific license (or licensing clause, etc.) for the ‘956 patent occurred because of the merits of the challenged claim, the merits of unchallenged claims, for other patented inventions, or for other economic reasons related to the whole ‘956 patent family.”).

[

] <sup>155</sup>

The evidence does not show, however, that these licenses are based on the merits of the patents as opposed to a business decision to avoid litigation, a prior business relationship, or other economic reason. *See In re Cree*, 818 F.3d at 703; *In re Antor Media*, 689 F.3d at 1294.

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Antor merely lists the licensees and their respective sales revenue. The licenses themselves are not even part of the record. Antor provides no evidence showing that the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons. The Board was thus correct in holding that the existence of those licenses is, on its own, insufficient to overcome the *prima facie* case of obviousness.

<sup>155</sup> It is not readily apparent whether the licenses are in the record or if Dr. Putnam read them. *See generally* CX-1905C (Putnam RWS) at Q/A 75-79.

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Further, neither Rovi nor Dr. Putnam point to a license distinctly identifying the '512 Patent, which is asserted and at issue in this case. Accordingly, the administrative law judge has determined that Rovi has not shown that licensing of the '512 Patent—apart from the portfolio—has been a success.

### (b) *Long-Felt Need*

Rovi's entire argument is:

The inventions of the '512 Patent fulfilled the long-felt need for a sophisticated program guide that can perform an allocation of functions amongst multiple tuners. The claimed inventions met a need for more flexibility and interruption-free use of the multi-tuner system. CX-1904C (Williams RWS) at Q/A 93-96. At the time of the invention, some persons of ordinary skill in the art would have expressed skepticism of such solutions. *Id.*

Rovi Br. at 196.

Long-felt need “is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem.” *Texas Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

Rovi's evidence consists of conclusory expert testimony. *See, e.g.*, CX-1904C (Williams RWS) at Q/A 93-96. Mr. Williams did not identify the date when the long-felt need first began (*i.e.*, Mr. Williams did not analyze the need “as of the date of an articulated identified problem and evidence of efforts to solve that problem,” per *Texas Instruments*).<sup>156</sup> *Id.* Further, Mr. Williams's testimony simply parrots Rovi's contentions and concludes by agreeing with them; no outside evidence is cited to support Rovi's contentions or Mr. Williams's opinion. *Id.*

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<sup>156</sup> While Mr. Williams discussed the 1992, 1998, and 1999 timeframes, those discussions were not cited by Rovi, and the discussions relate to the priority dates of the patents, not the dates when the alleged need arose.

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Accordingly, the administrative law judge has determined that this testimony is insufficient to find a long-felt need, and that this factor does not support non-obviousness.

### (c) *Weighing the Secondary Consideration Factors*

On the whole, Rovi's commercial success evidence and long-felt need arguments are of negligible probative value and fail to support a finding that the '512 Patent is not obvious. Thus, the evidence does not have a perceptible impact on the obviousness calculus.

### b) *Indefiniteness*

Comcast's entire argument is:

Claim 13 recites an "an interactive television program guide implemented on the system . . . operative to." As discussed above, this term should be properly construed as a means-plus-function term. But, the only structure provided is a general purpose processor. JX-0006 at 4:66-5:2 ("Each set-top box 112 preferably contains a processor to handle tasks associated with implementing a interactive television program guide application on the set-top box 112.") But, in cases involving a special purpose computer-implemented means-plus-function limitation, as we have here, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function. *See, e.g., Noah Systems Inc. v. Intuit Inc.*, 675 F.3d 1302, 1312 (Fed. Cir. 2012). There is no such algorithm identified here, and in particular, no algorithm for the steps of (1) receiving a request, (2) determining a conflict, or (3) displaying an alert. RX-0004C (Bederson WS) at Q/A 66-69. Accordingly, claim 13 should be held invalid as indefinite under §112(6).

Resps. Br. at 221.

The full text of the disputed phrase appears in bold, italicized text:

13. A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising:

a first tuner;

a second tuner; and



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*an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to:*

*receive a request to perform a tuning operation;*

*determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and*

*in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.*

JX-0006 at 19:41-59.

The administrative law judge construed the contested phrase “interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive . . . ; determine . . . ; and in response to the determination, display . . .” and addressed Comcast’s indefiniteness argument in Section VI(F)(2)(b)(14), above. Claim 13 is not found to be indefinite.

**8. Patent Eligibility**

Comcast argues that the asserted claims are directed to the abstract idea of providing an alert “receiving a request to perform a tuning operation, determining that a tuner is not able to perform that operation, and then displaying an alert to the user.” Resps. Br. at 203. Comcast relies upon *Comcast IP Holdings I, LLC v. Sprint Commc’ns Co. L.P.*, 55 F. Supp. 3d 544, 548-549 (D. Del. 2014), which found a claim directed toward a telephone network optimization method ineligible. *Id.* Comcast provides the following comparison between claim 1 of the ‘512 Patent and claim 21 from *Comcast IP Holdings*:

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### Rovi '512 Patent

1. A method for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the method comprising: receiving a request to perform a tuning operation; determining that neither a first tuner nor a second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and in response to the determination, displaying an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

JX-0006, '512 Patent at Claim 1

### Invalidated U.S. Pat. No. 6,873,694

21. A telephony network optimization method, comprising: receiving a request from an application to provide to the application service on a telephony network; and determining whether a telephony parameter associated with the request requires acceptance of a user prompt to provide to the application access to the telephony network.

Invalidated '694 Patent at Claim 21

Comcast then argues that claim 1 does not contain an inventive concept. This is

Comcast's inventive-concept argument:

The asserted claims of the '512 patent consist of "well-understood, routine, conventional activity," and contain nothing to transform them to a patent eligible application. *See Mayo*, 132 S.Ct. at 1297. To persons of ordinary skill in the art, the asserted claims are nothing more than implementation of the well-known concept of a "conditional execution" statement" (i.e., an "if statement"). RX-0004C at Q/A 20. And there is little dispute among the parties' experts that the claims were directed to well-known and standard software and hardware features (multiple tuners were known). *See Tr.* 1175:1-12 (interactive television program guides and receiving turning requests were known); RX-0004C at Q/A 21 (alert upon detection of resource conflict was well-known). And in fact, recent case law has even found these types of hardware conventional. *See Tech. Dev. Lic., LLC v. General Instrument Corp.*, 2016 WL 7104253, \*6 (N.D. Ill., Dec. 6, 2016) (tuner, remote control, processor).

Rovi contends that because tuner conflicts could be resolved in other ways not covered by the '512 claims – e.g., by prioritizing program types of one kind over another or selections of one user over another – but this provides no evidence that the claims of the '512 patent are inventive. The concept of allowing the user select the operation (e.g., recording or displayed program) to be canceled was well known. RX-0004C Q/A 24-26, 43-44, 52-53, 81, 86. And Rovi cannot expect to rely on the examiner's notice of allowance as indication of novelty sufficient to preserve patent eligibility. The notice of allowance in the '512 prosecution contained a generic statement that the prior art did not teach all the

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elements of the claims. But, by that measure, no patent claim would ever be found ineligible. Every issued patent claim has been subject to examiner review and found to contain elements not present in the prior art.

Resps. Br. at 205-06.

Rovi argues that the claims are not directed toward an abstract idea and that even if they are, the claims contain an inventive concept. Rovi Br. at 196-201.

### *a) Alice Step One: Abstract Idea*

The administrative law judge finds that the asserted claims are not directed toward an abstract idea.<sup>157</sup> Here, in summary, claim 1 pertains to a cable system (*e.g.*, a set-top box) having multiple tuners that:

- 1) Receives a request to record or watch a show;
- 2) Determines whether a tuner is or is not available to record or watch the show;
- 3) Displays a prompt allowing the user to record or watch the requested show or to cancel the request.

The claim language indicates that the predominant concept of claim 1 is confined to a concrete, tangible application in set-top boxes.<sup>158</sup> As Rovi notes, “these claims expressly recite a solution to a problem that necessarily arises only ‘when multiple operations are performed using multiple tuners controlled by an interactive television program guide.’” Rovi Br. at 196-97 (quoting JX-0006 (’512 Patent) at 18:35-47). Indeed, the administrative law judge found that the accused X1 products did not infringe claims 1 and 13 at least because the Rovi had not shown that the X1 set-top boxes have a second tuner. *See generally* Section IV(F)(4)(b)(1)(a). Likewise, Comcast’s obviousness combinations acknowledge that various prior art references contain

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<sup>157</sup> The administrative law judge finds Comcast has not met its burden under both the preponderance-of-the-evidence and clear-and-convincing standards.

<sup>158</sup> Claim 13 is also confined to a concrete, tangible application in set-top boxes.

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tuners and various prompts and alerts. *See generally* Section IV(F)(7)(a). Accordingly, Comcast has not met its burden of showing that claims 1 or 13 are directed toward an abstract idea.

### *b) Alice Step Two: Inventive Concept*

The administrative law judge has determined that Comcast fails to demonstrate that the ‘512 Patent does not contain an inventive concept.<sup>159</sup>

For inventive concept, “the key question is whether the claims add something to the abstract idea so that the patent covers a specific application of the abstract idea, rather than the idea itself.” *Netflix v. Rovi*, 114 F. Supp. 3d at 937.<sup>160</sup> Here, the inventive concept is the application of a single-tuner-conflict-management system to systems with multiple tuners. While that concept may not satisfy §§ 102 and 103, the concept is clearly new and useful, and is confined to a set-top box having two tuners (*e.g.*, an article of manufacture), such that it passes § 101’s eligibility filter. *See* 35 U.S.C. § 101 (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1327 (Fed. Cir. 2016) (the inventive concept is not focused on “economic or other tasks for which a computer is used in its ordinary capacity.”). Accordingly, the administrative law judge has determined that Comcast has not met its burden of demonstrating that the ‘512 Patent lacks an inventive concept.

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<sup>159</sup> The administrative law judge finds Comcast has not met its burden under both the preponderance-of-the-evidence and clear-and-convincing standards.

<sup>160</sup> *Netflix, Inc. v. Rovi Corp.*, 114 F. Supp. 3d 927, 937 (N.D. Cal. 2015), *aff’d*, No. 2015-1917, 2016 WL 6575091 (Fed. Cir. Nov. 7, 2016) (Fed. Cir. R. 36).

**V. ADDITIONAL DEFENSES**

**A. Comcast's Express and Implied Licensing Defenses**

"An express or implied license is a defense to infringement." *Radar Indus., Inc. v. Cleveland Die & Mfg. Co.*, 424 F. App'x 931, 933 (Fed. Cir. 2011). "The burden of proving that an implied license exists is on the party asserting an implied license as a defense to infringement." *Augustine Med., Inc. v. Progressive Dynamics, Inc.*, 194 F.3d 1367, 1370 (Fed. Cir. 1999).

**1. Overview of Agreements**

Rovi and Comcast entered into several commercial and licensing agreements in 2004 and 2010. The 2010 agreements amend and restate the 2004 agreements.

**a) 2004 Agreements (JX-0046C)**

On March 31, 2004, Comcast and a Rovi predecessor formed a joint venture, which became known as Guideworks, for the purpose of owning and developing IPGs for use by Comcast, among others. *See* Resps. Br. at 17. The formative document, JX-0046C, is entitled "FORMATION OF CABLE IPG JOINT DEVELOPMENT GROUP and ENTRY INTO LICENSE AND DISTRIBUTION AGREEMENT AND PROGRAMMING AGREEMENTS." JX-0046C at 1. JX-0046C includes patent and software licenses.

Comcast points to JX-0046C at 15 (and 23-24), § 2.04, as the clause that granted Comcast a license to software the joint venture created. Resps. Br. at 17. For background, section 2.04 follows:

4. [

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JX-0046C at 15 (underlining in original); *see also* RX-0001C at Q/A 15.

Additionally, JX-0046C contains a “LICESE A ND DISTRIBUTION AGEEMENT” that includes a patent licensing clause, § 1(b). For background, § 1(b) follows:

(b) 1

1

JX-0046C at 393-94 (underlining in original). Comcast refers to the license and distribution agreement as the “LDA,” while Rovi refers to this agreement as the “Patent License.” *Compare* Resps. Br. at 17 (referring to JX-0046C at 393-94 as the “2004 LDA”) *with* Rovi Br. at 4 (referring to JX-0047C, Ex. A (Patent License)).

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*b) 2010 Agreements (JX-0050C, JX-0052C, and JX-0053C)*

In February 2010, Comcast and Rovi ended the Guideworks joint venture, with Comcast acquiring Guideworks. RX-0001C (Marcus WS) at Q/A 19-21 (identifying JX-0053C as the 2010 Master Agreement); *see also* Rovi Br. at 381.

At the same time, the parties also entered into an amended license and distribution agreement, JX-0050C, which is titled “AMENDED AND RESTATED LICENSE AND DISTRIBUTION AGREEMENT.” Comcast refers to JX-0050C as the “ALDA,” while Rovi refers to it as the “Patent License” or the “2010 Amended Patent License.” *Compare* Rovi Br. at 4 *with* Resps. Br. at 18. JX-0050C provides a patent license, in § 1(b), as follows:

(b) [

]

JX-0050C at 5 (emphasis added; underlining in original). Section 8 of the agreement lays out fees and rebates. *Id.* at 17. Section 17 explains the license expires on March 31, 2016. *Id.* at 34

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(“The term (the ‘TERM’) of this AGREEMENT shall commence on March 31, 2004 and shall end on March 31, 2016.”).

At the same time, the parties also entered a cross license concerning software, JX-0052C, which is titled “CROSS LICENSE AGREEMENT.” Comcast refers to JX-0052C as the “ALDA,” while Rovi refers to it as the “Software License” or the “2010 Software License.” *Compare* Rovi Br. at 4 *with* Resps. Br. at 18. Comcast points to § 2.01, which follows:

[

]

Resps. Br. at 18 (citing JX-0052C at 8; emphasis in original). Rovi points to § 2.03, which follows:

[

]

Rovi Br. at 382 (citing JX-0052C at 9 (§ 2.03)).

**2. Express License**

Rovi frames its allegations, as follows:

Rovi accuses all digital video receivers and hardware and software components thereof, including all products capable of supporting Comcast’s X1 or Legacy Guide, that are or were: (1) products purchased by Comcast on or after April 1, 2016, regardless of



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when they were imported; (2) products installed by Comcast into its customer base on or after April 1, 2016, regardless of when they were purchased by Comcast or imported; and (3) products that Comcast now holds in inventory and that Comcast will, in the normal course of business, install into Comcast's customer base on or after April 1, 2016, regardless of when they were purchased by Comcast or imported. Rovi also accuses all Technicolor and ARRIS products capable of supporting Comcast's X1 or Legacy Guide, that are or were: (1) products imported on or after April 1, 2016 and sold to Comcast; (2) products sold to Comcast on or after April 1, 2016, regardless of when they were imported; and (3) products that Technicolor or ARRIS hold in inventory for sale to Comcast, regardless of when they were imported.

Rovi Br. at 10-11.

Comcast argues:

Under the ALDA, Comcast had an express patent license to Rovi's entire patent portfolio covering all of Comcast's products and services, including both Legacy and X1 STBs, for the period prior to March 31, 2016. *All* of the Legacy STBs at issue in this Investigation, and [[ ]] units of the accused X1 STBs, were imported and sold to Comcast before Comcast's license to Rovi's patent portfolio expired. RX-0386C [(Q2 2016 Leased [ ] Strategy)] at .0011; RX-0838C (Shank Rebuttal WS) at QA 28-29, 34, 36-37.

...

Because all Legacy STBs and certain X1 STBs were covered by an express patent license at the time of importation and sale to Comcast, there is no violation as to those STBs.

Resps. Br. at 19-20. Comcast adds that "Rovi's theory—that direct or indirect infringement may be found based on purely domestic conduct after a fully licensed importation—is contrary to Section 337 itself, which underscores that any violation must be founded on unlawful acts related to importation." *Id.* at 21.

Rovi presents relevant argument in its jurisdictional analysis:

Congress designed Section 337 to provide for, *inter alia*, cease-and-desist orders that bar an infringer's distribution of imported products in inventory—exactly the remedy that Rovi seeks here

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with respect to the products imported prior to the expiration of the Patent License. Nonetheless, Respondents argue that products imported prior to April 1, 2016 (i.e., during the term of the License) do not provide a basis for a violation of Section 337, because in their view only articles that “infringe at the time of importation” may violate Section 337. . . .

Congress has explained that Section 337 is designed to vest the Commission with enforcement authority “broad enough to prevent every type and form of unfair practice.” *Suprema, Inc.*, 796 F.3d at 1350. Comcast’s sale or lease of imported products in its inventory after importation is exactly the type of unfair practice that Section 337 was designed to redress by way of a cease-and-desist order.

Congress specifically envisioned that Section 337 would prevent infringers from building inventory of imported, infringing products in the United States. Congress amended Section 337 again in 1988 to allow the Commission to issue exclusion orders and cease-and-desist orders as to the same Respondent, such that the cease-and-desist order would apply to products that have been “stockpiled,” and the exclusion order would apply to products that have yet to be imported. *Id.*; H.R. Rep. No. 40, 100th Cong., 1st Sess. at 59-60. That is the circumstance here: Rovi seeks an exclusion order as to X1 and Legacy Products that have yet to be imported, and a cease-and-desist order as to those products that were stockpiled in inventory.

Rovi Br. at 14-16.

The 2010 Patent License, JX-0050C, permits Comcast (and authorized third parties) to “make and have made” and to “use, sell, offer for sale, lease, offer for lease, import, deploy, distribute or otherwise commercialize” products that practice Rovi’s Patents. JX-0050C at 5 (§ 1(b)). Thus, the license expressly allows Comcast, along with its suppliers, to import products before April 1, 2016.<sup>161</sup> Accordingly, the administrative law judge has determined that products imported before April 1, 2016 are not unlawful imports, and there has been no an unfair act

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<sup>161</sup> The evidence shows that Comcast paid [ ] for the 12-year license, along with significant additional payments following the 2010 restatement. See RX-0001C (Marcus WS) at Q/A 17-18, 35 (over [ ], based on Mr. Marcus’s approximation of [ ] per year in fees); Tr. 156-157.

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which would constitute a violation Section 337 for these products. The administrative law judge makes no determination on whether a subsequent domestic activity connected to products imported before April 1, 2016 (*e.g.*, any use or sale, completed on or after April 1, 2016, of a set-top box imported before April 1, 2016) infringes the asserted patents.

### 3. Implied License

Comcast argues:

... [

] By licensing to Comcast [ ] to the Legacy guides' software, the CLA provides Comcast an implied license to any Rovi patent implicated by that software. Rovi is estopped from derogating from the rights that it granted to Comcast in the CLA by pursuing patent infringement claims based on the very same software [ ]. *Wang*, 103 F.3d at 1581-82.

...

... Comcast entered into a JV with Rovi to develop IPGs—in large part at Comcast's expense—and sensibly contracted from the outset [ ] to the fruits of that development effort. *See id.* It would make no sense to agree to a deal that would permit Rovi to later assert patents against the very software that Comcast and Rovi developed in collaboration and largely at Comcast's expense.

Resps. Br. at 22-26. Comcast's implied license arguments are directed toward the Legacy guide and do not mention the X1 guide. *See generally id.*, Section III(C).

Rovi argues that the software licenses do not grant implied rights because the 2010 cross license disavowed any implied rights, because the patent rights were expressly conveyed in a

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separate document—the patent license, and because granting “the right to ‘use’ software, without more, does not convey a patent license.” *See* Rovi Br. at 383-85.

### *a) Disavowal*

Rovi argues:

*First*, the clear language of the 2010 Software License clearly disavowed any implied rights: [

] JX-0052C (2010 Software License) at § 2.03. As patent rights were not expressly granted, they were by definition, expressly reserved Comcast’s “implied license” defense fails for this reason alone.

Rovi. Br. at 383. Section 2.03 follows:

[

]

JX-0052C at 9 (§ 2.03).

Comcast argues:

Rovi contends that Section 2.03 of the CLA forecloses implied patent rights. That is not so. [

] But Section 2.03 nowhere states that it was reserving rights necessary for Comcast to realize the rights that were expressly granted, including the right to *use* the licensed software. *Id.* (CLA § 2.01) at .000008.

Resps. Br. at 22-23. Comcast then points to the drafting history and subsequent emails to argue that the agreement does not include an express disavowal.<sup>162</sup> *Id.* at 23-24.

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<sup>162</sup> Comcast has not explained why it is necessary to go beyond the agreement, which is an integrated document. *See* JX-0052C at 18-19 (§12.12 provides, [

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The administrative law judge has determined that § 2.03 disavows an implied license to Rovi's patents. Section 2.03 provides that all rights "to the extent not expressly granted herein, are hereby expressly reserved by RoviGuides and its Affiliates." The cross license does not expressly grant a license to Rovi's patents. Accordingly, the cross license does not provide Comcast with an implied license to practice Rovi's patents.

### *b) Separate Documents*

Rovi argues:

Second, the very structure of the agreements defeats Comcast's claim: patent rights were expressly conveyed in the 2004 Patent License, as amended in 2010, to cover the software of the joint venture, and software rights (source code and copyright) were expressly conveyed in the Software License of 2004, as amended in 2010. . . .

Because patent rights were expressly granted by the Patent License as to the software to be developed by the joint venture, including derivative software, they could not also have been *impliedly* conveyed by the Software License at the same time. An implied license to patent rights cannot co-exist with an express license to those same rights.

Comcast itself has recognized that the Patent License granted a (now-expired) express license as to Comcast's Legacy Products. . . . If the 2004 *Software* License conveyed those same rights, as Comcast and Mr. Marcus now suggest, then the Patent License—and the [ ] payment thereunder—would be redundant. . . .

Rovi Br. at 384-85. Rovi then distinguishes cases that Comcast cited "for the proposition that an implied license can coexist with an express grant[.]" *Id.* at 385. Rovi argues:

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J). *See Inv'r's Ins. Co. of Am. v. Dorinco Reinsurance Co.*, 917 F.2d 100, 104 (2d Cir. 1990) ("Parol evidence may be admitted to explain a writing only when the terms of the writing itself are ambiguous.").

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These cases stand for the mere proposition that a license to a continuation or reissue patent will implicitly include a license to the parent patent, if such a license is necessary to practice the expressly licensed continuation or reissue patents. Not one of these cases renounces black letter law that an express and implied license cannot coexist as to the same subject. *Atlas*, 895 F.2d at 754-55.

Rovi Br. at 385.

Comcast argues:

... the Federal Circuit has regularly found that an implied license may co-exist with an express patent license. *See, e.g., Gen. Protecht Grp., Inc. v. Leviton Mfg. Co.*, 651 F.3d 1355, 1361-62 (Fed. Cir. 2011); *see also, e.g., Intel Corp. v. Negotiated Data Solutions, Inc.*, 703 F.3d 1360, 1366-67 (Fed. Cir. 2012); *TransCore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271, 1279-80 (Fed. Cir. 2009). That is particularly true where, as here, the express license and the implied license are directed to different subject matter and serve different purposes. The 2010 ALDA expanded the scope of a pre-existing and term-limited express patent license that granted Comcast *broad* rights under all of Rovi's patents for a limited term. [

]

Resps. Br. at 24.

The administrative law judge finds that given the side-by-side structure of the agreements, the agreements must be read together, to give meaning to the patent rights that were addressed in the 2010 Patent License, JX-0050C. The agreements are governed by New York law, which requires that agreements executed as part of the same transaction be read together. *See This Is Me, Inc. v. Taylor*, 157 F.3d 139, 143 (2d Cir. 1998); *Gordon v. Vincent Youmans, Inc.*, 358 F.2d 261, 263 (2d Cir. 1965) ("it is both good sense and good law that these closely

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integrated and nearly contemporaneous documents be construed together”); *Paneccasio v. Unisource Worldwide, Inc.*, 532 F.3d 101, 111 (2d Cir. 2008) (“The rules of contract construction require us to adopt an interpretation which gives meaning to every provision of the contract.”); Restatement (Second) of Contracts § 202(2) (2008) (“all writings that are part of the same transaction are interpreted together”).<sup>163</sup> As explained above, the patent license permits Comcast (and authorized third parties) to “make and have made” and to “use, sell, offer for sale, lease, offer for lease, import, deploy, distribute or otherwise commercialize” products that infringe Rovi’s Patents. JX-0050C at 5 (§ 1(b)). Reading the software license to grant an implied license to Rovi’s patents would undercut the import of the patent license, which was signed on the same day as the software license.

### *c) Right to “Use” Software*

Comcast argues:

At least since 2004, the parties addressed the JV and their respective rights to the fruits of that JV separate from any general license for Comcast to Rovi’s entire patent portfolio. The 2010 CLA implemented the parties’ 2004 agreement that, in the event one party later purchased the other’s interest, Rovi would grant Comcast a *perpetual* license to that software, including the right to, among other things, perpetually *use* the IPG software created by the JV. JX-0052C (CLA § 2.01) at .000008; JX0046C (2004 License Agmt. § 2.05) at .000085. If Rovi were permitted to assert patent infringement based on the Legacy guides now that the ALDA’s broader license to Rovi’s entire patent portfolio has expired, Comcast’s perpetual license to use the Legacy guides would not be perpetual at all. The parties clearly did not intend that unreasonable result, as evidenced by the fact that the CLA expressly grants Comcast a right to “use” the licensed software—a

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<sup>163</sup> The license itself says it should be read with the corresponding documents. *See* JX-0052C at 18-19 [

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right under the Patent Act. 35 U.S.C. § 271(a). Where, as here, a grantor confers “a right to ‘use’ . . . software,” it is understood that the grant “carries with it a license to utilize the grantor’s intellectual property rights as needed for such use.” Mark G. Malven, *Technology Transactions: A Practical Guide to Drafting and Negotiating Commercial Agreements* 1-4 n.1 (Paul Matsumoto ed., 2015).

Resps. Br. at 25 (footnotes omitted).

Rovi argues:

*Third*, it is well established that the right to “use” software, without more, does not convey a patent license. Mr. Marcus proclaimed that the right to “use” Rovi’s software as conveyed in the 2004 and 2010 Software Licenses constitutes an express or implied patent right. Marcus Tr. 524. Not so. The Federal Circuit has rejected such an argument. In *State Contracting & Eng’g Corp. v. Florida*, the Federal Circuit held that a grant of “all rights to use, duplicate or disclose [data], in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so” did not impart a license to patent rights. 258 F.3d 1329, 1339, 1339-40 (Fed. Cir. 2001) (emphasis omitted); *see also Intel Corp.*, 173 F. Supp. 2d at 213 (finding no implied license where a contract bestows intellectual property other than patents).

Here, too, the word “use” in the Software Licenses falls squarely within the copyright context in which it appears. [

] To show infringement under copyright law, a plaintiff must show that the defendant has “used her property.” *Chamberlain Group, Inc. v. Skylink Techs, Inc.*, 381 F.3d 1178, 1193, 1202 (Fed. Cir. 2004) (emphasis added). “Use,” as it appears in the Software Licenses, then, plainly refers to *copyrights*—not patent rights, which are not mentioned and were expressly granted by the Patent License.

...

Indeed, Comcast *had* patent rights that covered derivative software—for a term that has now expired. The 2004 Patent License explicitly covered the IPG software [

] JX-0047C, Ex. A (Patent



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License) at 3, 5. If Comcast wished to continue to use derivative software insulated from infringement liability beyond the expiration of that license, Comcast could have either renegotiated the license or created non-infringing versions of the software. Comcast was thus similarly situated to all of its competitors, all of whom developed IPG software with a term license to Rovi's patents. Each of those competitors has renewed its patent license to continue to use its licensed software; Comcast could have done the same, but has not.

Rovi Br. at 386 (emphasis in original).

In reply, Comcast argues that two cases Rovi relies on, *State Contracting & Eng'g Corp. v. Florida*, 258 F.3d 1329 (Fed. Cir. 2001) and *Hilgräve Corp. v. Symantec Corp.*, 265 F.3d 1336 (Fed. Cir. 2001) are distinguishable. *See* Resps. Reply at 10.

The administrative law judge finds that the § 2.03 does not convey a “right to use” under 35 U.S.C. § 271; § 1(b) of the patent license conveys that right. Further, Comcast has not cited any legal authority to support its argument.

Accordingly, the administrative law judge has determined that Comcast does not have an implied license to infringe Rovi's patents through the Legacy guide. Further, Comcast has not shown that it has an implied license to infringe Rovi's patents through the X1 guide, particularly as it has presented no separate argument or evidence pertaining to the X1 guide.

### **B. Comcast's Exhaustion Defense**

“[P]atent exhaustion is an affirmative defense for which the alleged infringer has the burden of proof.” *SanDisk Corp. v. Mobile Media Ideas LLC*, No. C 11-00597 CW, 2011 WL 1990662, at \*3 (N.D. Cal. May 23, 2011).

Comcast argues:

The “authorized sale of an article that substantially embodies a patent exhausts the patent holder's rights and prevents the patent holder from invoking patent law to control postsale use of the article” because the patent holder licensed the licensee “to practice

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any of its patents and to sell products practicing those patents.” *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 638 (2008); *see also Keurig, Inc. v. Sturm Foods, Inc.*, 732 F.3d 1370, 1375 (Fed. Cir. 2013). *In accusing the Legacy STBs of infringement*, Rovi has in substance alleged that the asserted patent claims are substantially (if not entirely) embodied in the very software that Rovi licensed to Comcast under the CLA. RX-0002C (Radloff WS) at QA 17, 25, 30, 32, 35, 37. Thus, Rovi’s grant of the perpetual software license in the CLA bars Rovi’s claims.

While Rovi has contended that patent exhaustion cannot occur without a formal transfer of title, the case on which it has relied expressly observed that the “authorized acquirers” protected by the exhaustion doctrine include “those who acquire possession and operational control, as by lease, from [the patentee].” *Helperich Patent Licensing, LLC v. N.Y. Times Co.*, 778 F.3d 1293, 1297 n.1 (Fed. Cir. 2015) (emphasis added) (citations omitted). Here, Comcast acquired “possession and operational control” of the Legacy guide software through the CLA and the Master Agreement, which gave Comcast unencumbered perpetual rights to use and reproduce the Guideworks software as Comcast saw fit. *See, e.g.*, JX-0053C (Master Agreement § 6.2(a)) at .000012-.000013; JX-0052C (CLA §§ 2.01, 5.01) at .000008, .000011. Rovi cannot now invoke patent law to control postsale use of the Legacy guides. *Quanta Computer, Inc.*, 553 U.S. at 638.

Resps. Br. at 26-27 (emphasis added).

Rovi argues:

Comcast also argues that the Asserted Patents are exhausted by the Software License as to Comcast’s Legacy Products. Comcast’s exhaustion argument fails for two reasons: (1) patent exhaustion, as judicially fashioned and narrowly applied, may only be triggered by the sale of an infringing article; and (2) exhaustion does not apply to reproductions. . . .

*First*, patent exhaustion has historically been construed narrowly. *Helperich Patent Licensing, LLC v. New York Times Co.*, 778 F.3d 1293, 1301-07 (Fed. Cir. 2015). It is triggered only by the authorized *sale*, by the patent holder or licensee, of an article that embodies the exhausted patent. *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 636 (2008); *Helperich*, 778 F.3d at 1297 n.1 (exhaustion protects “authorized acquirer[s],” which are

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“those who acquire title to the article at issue from the patentee or from a licensee authorized to sell”).

Here, Comcast’s exhaustion defense is based on a software license granting Comcast limited rights to use certain software under the 2010 Software License—not the sale of any article. Resps P.H. Br. at 57-58. Comcast has cited no authority for the proposition that the exhaustion doctrine should be expanded to apply in the context of a software license. Comcast points to *LG Elects., Inc. v. Hitachi, Ltd.* to purportedly support its contention that a “license” can constitute a sale for exhaustion purposes, but that lone district court case, which pre-dates the Federal Circuit’s *Helfrich* opinion by six years, is not about software. *LG Electronics* stands for the unremarkable proposition that a *patent* license may authorize foreign sales of patented articles to which exhaustion would then attach. 655 F. Supp. 2d 1036, 1044 (N.D. Cal. 2009).

Comcast also asserts that the perpetual rights to the software are “unencumbered” and therefore exhaust Rovi’s patent rights. But this is merely a repackaging of Comcast’s implied rights argument. See Section XI(A)(3), *supra*. The 2010 Software License is not a patent license—it conveyed no patent rights. Patent rights as to joint venture software (including in the event of dissolution) were conveyed by the contemporaneous but separate Patent License, which expired on March 31, 2016. JX-0047C, Ex. A (Patent License) at 3, 5.

*Second*, and equally important, exhaustion attaches only to the particular patent-authorized article that was sold, and not to any reproduction thereof. *Bowman v. Monsanto Co.*, 133 S. Ct. 1761, 1764 (2013). “That is because, once again, if simple copying were a protected use, a patent would plummet in value after the first sale of the item containing the invention. The undiluted patent monopoly, it might be said, would extend not for 20 years (as the Patent Act promises), but only for one transaction.” *Id.* at 1768. Thus, *even if* title to a copy of the Rovi Software passed to Comcast in 2010 (no such event occurred), exhaustion would potentially attach *to that particular copy only*, such that Comcast would be free to dispose of only that particular copy. Comcast’s argument that a right to reproduce software intrinsically includes the right to practice patents long after such a license has expired is unsupported. Under controlling Supreme Court precedent, exhaustion does not reach copies of Comcast’s Legacy Guide resident on the set-top boxes provided to its subscribers—the focus of Rovi’s infringement allegations for the patents that implicate Legacy Products. *Id.*

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Rovi Br. at 387-89.

Neither party presents a reply. *See generally* Rovi Reply, Section XI Resps. Reply, Section III.

The administrative law judge has determined that Comcast has not shown its acquisition of “‘possession and operational control’ of the Legacy guide software through the CLA and the Master Agreement” constitutes a sale for purposes of patent exhaustion.<sup>164</sup> As Rovi correctly notes, the 2010 software license was encumbered, as Rovi reserved ownership and control of its patent rights (which were simultaneously licensed for a fixed term). Further, even if the software cross license is considered an authorized sale of an article, that sale does not give Comcast infinite rights to reproduce the Legacy guide. *See Bowman v. Monsanto Co.*, 133 S. Ct. 1761, 1764 (2013). Finally, for the avoidance of doubt, the administrative law judge notes that Comcast has not shown exhaustion pertains to the X1 guide.

Accordingly, the administrative law judge has determined that Comcast’s exhaustion defense fails.

### **C. ARRIS’s Forum Selection, Estoppel and Waiver Defenses**

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<sup>164</sup> Comcast does not address § 2.04 (“Authorized Sales”) of the Software License. *See* JX-0052C at 9 (identifying limits on authorized sales).

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**1. Overview of License (JX-0068C)**

[

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At the hearing, witnesses from both parties also testified that the contract was not ambiguous. Mr. Armaly, Rovi's Executive Vice President of Intellectual Property and Licensing, testified, as follows:

Q. . . . You're a lawyer, aren't you, by training?

A. I am.

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Q. And you're aware of the parol evidence rule?

A. I'm generally aware of it.

Q. You probably learned about that in law school. Do you think this agreement is ambiguous?

A. I don't think it's ambiguous.

Q. So Rovi's position is this agreement is not ambiguous, it's clear?

A. Correct.

Q. And that's your position too?

A. That's my position.

Tr. 140-141. Mr. Van Aacken, ARRIS's VP and lead counsel for ARRIS group, testified, as follows:

Q. In your witness statement, you testified about a certain license agreement between Rovi and ARRIS; right?

A. I did.

Q. Now, let me just ask you this first. Is that agreement ambiguous in any way?

A. Not to me.

Tr. 490.

ARRIS's witnesses confirmed that the set-top boxes in this investigation do not carry

ARRIS IPGs. Mr. Van Aacken also testified about the products it sells to Comcast, as follows:

Q. Now, I want to be clear up front about your arguments about this agreement. ARRIS doesn't argue that it has an express license that covers the accused products in this investigation on account of that license, does it?

A. We do not argue that the license covers the products we sell to Comcast.

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Q. And that's because you just heard testimony -- or maybe you didn't hear, but your colleague just testified that the accused set-top boxes do not have any IPGs that are ARRIS IPGs; is that right?

A. That's right. The boxes don't have any IPGs on them.

Tr. 490-491. Robert Folk, Vice President of Product Management for ARRIS, testified, as follows:

Q. I just want to be clear about the ARRIS software. The ARRIS software that's loaded onto the device is not an ARRIS interactive program guide, is it?

A. No.

Tr. 486.

**2. Enforcement Action and Forum Selection**

ARRIS argues that the investigation should be terminated with respect to ARRIS because the [

] limits the forum for any proceedings arising out of or otherwise related to the parties' agreement to courts within the state and city of New York." Resps. Br. at 27.

With regard to the enforcement action, ARRIS argues:

[

] This action was filed as a direct result of the failed licensing discussions between Comcast and Rovi. *See* Amended Complaint, at ¶2. As Mr. Armaly testified, Rovi had sought to negotiate directly with Comcast regarding Rovi's IPG patents for over two years. CX-0001C at Q/A 118. Those negotiations failed, and upon expiration of Comcast's prior license agreement, Rovi filed this action—and other actions in U.S. district court—against Comcast



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and ARRIS. *See, e.g.*, Amended Complaint, at ¶2; RX-0698 at 4. This action concerns six of the Rovi IPG patents that were discussed by Rovi and Comcast during their negotiations (see CX-0001C at Q/A 118–132), each of which is subject to the ARRIS-Rovi Agmt. *See* Amended Complaint, at ¶5.

Resps. Br. at 33. ARRIS relies upon “the plain language of [19 U.S.C. § 1337(c)], Supreme Court precedent, the deference given by the courts, and the *Semiconductor Chips* investigation,” to argue that the forum selection clause “has the same impact as an arbitration clause under Section 337(c).” *Id.* at 28-30.

Rovi argues:

The ARRIS IPG License, however, has nothing to do with Rovi’s claims against the Accused Products here, which are ARRIS set-top boxes designed for *Comcast* IPGs. Both ARRIS corporate witnesses testified that the Accused Products do not involve IPGs developed by or for ARRIS and are therefore not licensed by the ARRIS IPG License. Folk Tr. 486, Van Aacken Tr. 490.

Rovi Br. at 389. Rovi also argues that ARRIS’s arguments about the forum selection clause are breach-of-contract claims, and that those claims should be adjudicated in New York. *Id.* at 391-93.

ARRIS replies that in the ARRIS-Rovi IPG License, [

] Resps. Reply at 11.

The administrative law judge has determined that the ARRIS-Rovi IPG License does not preclude this investigation with respect to ARRIS, as ARRIS urges. The ARRIS-Rovi IPG License’s grant is limited to [ ] IPGs. JX-0068C at 1, 5 (RECITALS; ¶ 2.1). [

] Comcast’s X1 and Legacy guides are not [ ] IPGs, and the ARRIS-

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Rovi IPG License says nothing about ARRIS's ability to sell hardware to Comcast.

Accordingly, even if the investigation constitutes an [ ] under the ARRIS-Rovi IPG License, the dispute does not arise out of, or relate to, the ARRIS-Rovi IPG License, because the License pertains to [ ] IPGs, not the hardware ARRIS sold to Comcast.

In addition, with respect to ARRIS's argument that termination is appropriate under § 337(c) because its forum selection clause is equivalent to a settlement agreement or an arbitration clause, the administrative law judge finds that ARRIS has not shown that termination is warranted. In effect, ARRIS argues that the Commission cannot investigate unfair trade practices and their effect on domestic industries based on an agreement between private parties. ARRIS, however, has not addressed its failure to obtain an injunction barring the action in light of the forum selection clause. As mentioned in Order No. 31, the Commission has terminated investigations under Commission Rule 210.21 after a complainant moved to terminate the investigation and withdraw the complaint in light of a district court's injunction barring the Commission action due to a forum selection clause. *See, e.g., Certain Network Commc'ns Sys. For Optical Networks and Components Thereof*, Inv. No. 337-TA-535, Initial Determination (Order No. 6) (June 7, 2005); *Certain Ground Fault Circuit Interrupters and Prods. Containing Same*, Inv. No. 337-TA-739, Initial Determination (Order 19) (Jan. 19, 2011).

ARRIS's arguments are breach-of-contract claims, which are not a defense the Commission's statutory directive to investigate unfair trade practices (or to patent infringement).<sup>165</sup> *See* 19 U.S.C. § 1337(c); *General Protecht Group, Inc. v. Leviton Mfg. Co.*,

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<sup>165</sup> During the Hearing, ARRIS characterized its claims as a breach of contract. *See* Tr. 79 ("And the two promises -- the two promises that are in that private party agreement. [

] The second promise was that if there were disputes arising under our agreement with Rovi, they were to be

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651 F.3d 1355, 1359 (Fed. Cir. 2011). Whether or not Rovi has, in fact, breached the ARRIS-Rovi IPG License by filing a complaint with the Commission is for the New York court to determine and to remedy, if needed.

Accordingly, the administrative law judge finds that ARRIS has not shown that termination is warranted.

### 3. Implied License

For implied license, ARRIS argues:

... Rovi's promises in the ARRIS-Rovi Agmt. give rise to at least an implied license to ARRIS that operates as a defense to Rovi's infringement claims against ARRIS in this Investigation. JX-0068C at 7729–30; RX-0782C at Q/A 17; Tr. 499:2–12; *see General Protecht*, 651 F.3d at 1359–60. [

] This promise by Rovi amounts to an implied license to ARRIS of equal scope. *See, Carborundum Co. v. Molten Metal Equip. Innovations, Inc.*, 72 F.3d 872, 878 (Fed. Cir. 1995) (noting that a license, “which may be express or implied,” is “in essence nothing more than a promise by the licensor not to sue the licensee”).

Indeed, the closing sentence of [

]—confirms that such an implied license to ARRIS arose from Rovi's promise, in contrast to any such implied license passing through to the [

] JX-0068C at 7729–30 (emphasis added); *see* Tr. 497:18–498:7, 499:2–500:1. Rovi's interpretation of this sentence, on the other hand, so as to carve out any implied license to ARRIS itself, cannot be reconciled with the plain language of the parties' agreement in the earlier sentence of [

] JX-0068C at 7729; *see TransCore, LP v.*

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resolved in New York by New York courts, not in the ITC. *That promise was breached too*, and we think the remedy is dismissal of Arris.” (emphasis added)).

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*Elec. Transaction Consultants Corp.*, 563 F.3d 1271, 1278–79 (Fed. Cir. 2009) (finding an implied license to continuation patents arose from a settlement agreement despite statements therein that “[n]o express or implied license” was being granted in the release and that the “Covenant Not To Sue shall not apply to any other patents ... to be issued in the future”).

...  
Independent of Section 337(c), should the ALJ find that one or more of the asserted claims is infringed by ARRIS, ARRIS’s affirmative defenses preclude the entry of any limited exclusion order against ARRIS for similar reasons as set forth above. For example, as discussed above, Rovi’s promises in the ARRIS-Rovi Agmt. give rise to an implied license to ARRIS, which operates as a defense to Rovi’s infringement claims against ARRIS in this Investigation. JX-0068C at 7729–30; RX-0782C at Q/A 17; *see* Tr. 499:2–12; *see General Protecht*, 651 F.3d at 1359–60; *see also Carborundum*, 72 F.3d at 878.

Resps. Br. at 39-40, 44-45.

The license contains numerous clauses curtailing the scope of the license and any unintended grant of rights. Paragraph 2.4 provides:

[

JX-0068C at 6. [

] Accordingly, the administrative law judge has determined that the ARRIS-Rovi IPG License does not give ARRIS an implied license “that operates as a defense to Rovi’s infringement claims against ARRIS,” as ARRIS argues.

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### 4. Equitable Estoppel

For equitable estoppel, ARRIS's entire argument is:

Rovi's infringement claims are likewise barred by the doctrine of equitable estoppel. *Radio Sys. Corp. v. Lalor*, 709 F.3d 1124, 1130 (Fed. Cir. 2013) (listing required elements for equitable estoppel). Through Sections 2.2 and 2.3 of the ARRIS-Rovi Agmt., and Rovi's statements and conduct in the related negotiations, Rovi led ARRIS to reasonably infer that Rovi did not intend to enforce its patent rights against ARRIS so long as ARRIS [

] JX-0068C at 7729–30; RX-0782C at Q/A 17. ARRIS relied on Rovi's promises, statements, and conduct in thereafter continuing to supply Comcast with set-top box products for use in Comcast's network and services. Additionally, ARRIS is [not seeking to indemnify Comcast against any claim by Rovi] in this Investigation. *See, e.g.*, RX-0782C at Q/A 31–32. ARRIS will be materially prejudiced if Rovi's infringement claims are permitted.

Resps. Br. at 45.

Rovi replies:

As Rovi has explained, Compls. Br. at 389-91, ARRIS has no reasonable affirmative defense that arises out of the ARRIS IPG License, a limited patent license that covers only particular software—"IPGs developed by or for ARRIS." The parties have long agreed—and affirmed in several rounds of briefing in New York state court, in the Eastern District of Texas, before the Commission, and in live testimony—that the Accused Products in this Investigation are not "IPGs developed by or for ARRIS." *Id.* ARRIS insists, however, that the ARRIS IPG License must extend to hardware provided to Comcast—accused set-top boxes that have nothing to do with ARRIS IPGs—under doctrines of implied license, equitable estoppel, or waiver. Resps. Br. 45. Having spent only a few lines per theory, ARRIS can hardly contend that it meets its burden to establish any one of these alleged defenses by a preponderance of the evidence. *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094, 1102 (Fed. Cir. 2001).

Rovi Reply at 142.

*Radio Systems Corporation v. Lalor* provides:

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three elements are required for equitable estoppel to bar a patentee's suit: (1) the patentee, through misleading conduct (or silence), leads the alleged infringer to reasonably infer that the patentee does not intend to enforce its patent against the alleged infringer; (2) the alleged infringer relies on that conduct; and (3) the alleged infringer will be materially prejudiced if the patentee is allowed to proceed with its claim.

709 F.3d 1124, 1130 (Fed. Cir. 2013).

The administrative law judge has determined that ARRIS has not shown that equitable estoppel applies. Paragraph 2.4 of the ARRIS-Rovi IPG License explicitly curtails estoppel, and paragraphs 2.2 and 2.3 curtail any covenant-not-to-assert or "any similar right" to ARRIS. Further, ARRIS has not cited any evidence of material prejudice. *See generally* Resps. Br., Section IV. Accordingly, equitable estoppel does not apply.

### 5. Waiver

For waiver, ARRIS's entire argument is:

Waiver similarly applies. Rovi intentionally relinquished the right to involve ARRIS in an [ ] against Comcast so long as [ ] JX-0068C at 7729–30; *see U.S. v. Olano*, 507 U.S. 725, 733 (1993) ("[W]aiver is the 'intentional relinquishment or abandonment of a known right.'").

Resps. Br. at 45.

Rovi replies:

As Rovi has explained, Compls. Br. at 389-91, ARRIS has no reasonable affirmative defense that arises out of the ARRIS IPG License, a limited patent license that covers only particular software—"IPGs developed by or for ARRIS." The parties have long agreed—and affirmed in several rounds of briefing in New York state court, in the Eastern District of Texas, before the Commission, and in live testimony—that the Accused Products in this Investigation are not "IPGs developed by or for ARRIS." *Id.* ARRIS insists, however, that the ARRIS IPG License must extend to hardware provided to Comcast—accused set-top boxes that have nothing to do with ARRIS IPGs—under doctrines of implied

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license, equitable estoppel, or waiver. Resps. Br. 45. Having spent only a few lines per theory, ARRIS can hardly contend that it meets its burden to establish any one of these alleged defenses by a preponderance of the evidence. *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094, 1102 (Fed. Cir. 2001).

Rovi Reply at 142.

ARRIS's entire argument for a case-dispositive issue is 30 words. It cites no evidence beyond the text of the ARRIS-Rovi IPG License, and the only case it cites addressed waiver in the context of "whether the presence of alternate jurors during jury deliberations was a 'plain error' that the Court of Appeals was authorized to correct under Federal Rule of Criminal Procedure 52(b)." *United States v. Olano*, 507 U.S. 725, 727 (1993).

Paragraph 2.4 of the ARRIS-Rovi IPG License explicitly [ ] JX-0068C at 6. Further, ARRIS has not shown that any relinquishment was intentional, as the ARRIS-Rovi IPG License states that [ ] Accordingly, waiver does not apply.

**6. Issue Preclusion**

Rovi contends ARRIS's contract arguments are barred by issue preclusion.<sup>166</sup> Rovi argues:

The ITC and the Federal Circuit have long recognized that "those who have contested an issue shall be bound by the result of the contest, and that matters once tried shall be considered forever settled as between the parties." *Young Eng'rs, Inc. v. Int'l Trade Comm'n*, 721 F.2d 1305, 1315 (Fed. Cir. 1983). Issue preclusion requires that an identical issue was actually litigated and decided in a prior action, the party against whom estoppel is invoked had a full and fair opportunity to litigate the issue, and the resolution of the issue was essential to a final judgment. *Certain Integrated*

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<sup>166</sup> The prior decision is: *Rovi Guides, Inc. v. Comcast Corp.*, No. 2:16-CV-00322-JRG-RSP (Dkt. 182), 2016 WL 6217201, (E.D. Tex. Oct. 25, 2016).

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*Circuits, Chipsets, & Prods. Containing Same*, Inv. No. 337-TA-786, Initial Determination, 2012 ITC LEXIS 1891, at \*110-11 (July 12, 2012) (quoting *Innovad Inc. v. Microsoft Corp.*, 260 F.3d 1326, 1334 (Fed. Cir. 2001)). A finding as to the enforcement of a forum selection clause upon a motion to transfer is a “final judgment” for purposes of issue preclusion. *Morgan Tire of Sacramento v. Goodyear Tire*, No. 2:15-cv-00133-KJM-AC, 2015 U.S. Dist. LEXIS 51778, \*15-16 (E.D. Cal. Apr. 20, 2015). A party who has litigated a forum selection clause against an opposing party in one forum may not then litigate the same clause against the same party in another forum. *Surgical Orthomedics, Inc. v. Brown Rudnick LLP*, No. 12-6652, 2013 U.S. Dist. LEXIS 87418, at \*4-7 (D.N.J. June 21, 2013).

Rovi Br. at 390. Rovi further argues that although the Eastern District of Texas “transferred the action for judicial economy reasons, this determination is ‘essential’ to the judgment for purposes of issue preclusion.” *Id.* at 391.

ARRIS argues:

... Judge Payne plainly did not decide the issue of termination of this Investigation under Section 337(c) in view of the ARRIS-Rovi Agmt., let alone in a final judgment. Moreover, and most tellingly, Magistrate Judge Payne’s remarks regarding the ARRIS-Rovi Agmt. were not “essential” to his decision—the *granting* of ARRIS’s motion.

... Moreover, the lynchpin in Judge Payne’s remarks—“breach of contract is not a defense to patent infringement”—*ignores* ARRIS’s affirmative defenses in this Investigation, which are recognized defenses to patent infringement. *See Anton/Bauer, Inc. v. PAG, Ltd.*, 329 F.3d 1343, 1350 (Fed. Cir. 2003) (“An implied license is a defense to patent infringement.”). As set forth above and below, ARRIS’s affirmative defenses in this Investigation are based on the [ ] clauses of the ARRIS-Rovi Agmt., and thereby raise “a non-frivolous dispute regarding the scope of a patent license,” triggering the broad forum selection clause of the ARRIS-Rovi Agmt. *General Protecht*, 651 F.3d at 1359.

Resps. Br. at 43-44.

In *Innovad Inc. v. Microsoft Corp.*, the Federal Circuit explained



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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) (citing *Lawlor v. Nat'l Screen Serv. Corp.*, 349 U.S. 322, 326 (1955)). Issue preclusion operates only if: (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 party against whom estoppel is invoked had a full and fair opportunity to litigate the issue in the first action.

260 F.3d 1326, 1334 (Fed. Cir. 2001).

The administrative law judge has determined that Rovi has not shown that issue preclusion applies. As the parties note, issue preclusion requires the “identical issue” to be litigated. The Eastern District of Texas granted ARRIS’s motion to change venue pursuant to a forum selection clause. Here, ARRIS seeks to terminate the investigation altogether, under 19 U.S.C. § 1337(c), as if the forum selection clause is equivalent to a settlement agreement or arbitration clause. As discussed above, terminating an investigation under § 337(c) differs from transferring venue pursuant to a forum selection clause. Accordingly, issue preclusion does not apply.

## VI. DOMESTIC INDUSTRY – ECONOMIC PRONG

As argued with regard to the technical prong, Rovi has identified the following domestic industry products: Rovi i-Guide, Rovi Passport, Rovi TotalGuide xD system, Verizon FiOS system, and SuddenLink. Rovi generally does not contend the Verizon system (apart from licensing, for instance) constitutes a portion of its domestic industry. *See Rovi Br.* at 334-36.

### A. Rovi’s Investment in Plant and Equipment

Rovi contends it has invested [ ] in information-technology (“IT”) and facilities related to its Passport product “which included hardware, software, and associated infrastructure

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investments, all necessary to develop Passport.” CX-0007C (Putnam WS) at Q/A 88-89; CX-1456C (DI Product Financials); CX-0006C (Bright WS) at Q/A 53-57. Rovi also contends it invested [ ] in IT and facilities related to i-Guide and [ ] for TotalGuide xD. *See* CX-0007C (Putnam WS) at Q/A 90-93; CX-1456C (DI Product Financials); CX-0006C (Bright WS) at Q/A 53-57.

Comcast argues that Rovi’s investments do not count “under Prong A because they relate to R&D or sales and marketing.” Resps. Br. at 361. Comcast argues:

For iGuide, of the [ ] relate to R&D, [ ] relate to sales, and [ ] relate to marketing. *See* RDX-1501C (citing RPX-0004C). For Passport, of the [ ] relate to R&D, [ ] relate to sales, and [ ] relate to marketing. *See id.* For TotalGuide xD, of the [ ] relate to R&D and [ ] relate to sales. *See id.*

*Id.* at n.97.

Rovi responds that R&D expenses have been used to satisfy prong A:

[T]he Commission has long found it appropriate to independently account for the same domestic industry investment under separate domestic industry categories. *See, e.g., Certain Table Saws Incorporating Active Injury Mitigation Tech. & Components Thereof*, Inv. No. 337-TA-965, Initial Determination, at 16-17 (Mar. 22, 2016) (unreviewed) (including the complainant’s R&D facility and unspecified “office space” in a 337(a)(3)(A) analysis and “R&D,” “engineering,” and “technical service” as relevant labor expenses under 337(a)(3)(B)); *Certain Modified Vaccina Ankara (“MVA”) Viruses and Vaccines and Pharmaceutical Compositions Based Thereon*, Inv. No. 337-TA-550, Initial Determination, at 95-96 (Sept. 6, 2006) (unreviewed) (complainant’s lease of “research facility” significant under 337(a)(3)(A); *Certain Multiple Mode Outdoor Grills and Parts Thereof*, Inv. No. 337-TA-895, Initial Determination, at 89-91 (Sept. 26, 2014) (unreviewed in relevant part) (finding satisfaction of subsection (B) based in part on labor relating to engineering and R&D).

Rovi Reply at 126-27.

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Rovi has nine U.S. facilities that support sales, marketing, technical support activities, product development, and activities related to the DI Products. CX-0007C (Putnam WS) at Q/A 95-98; JX-0039 (Rovi 2015 10-K); CX-0006C (Bright WS) at Q/A 23, 29-32. Rovi's Burbank, California office provides significant support for Passport; Rovi's Golden, Colorado office is primarily associated with the development and support of i-Guide; Rovi's Tulsa, Oklahoma office is associated with support for all of Rovi's DI Products (including post-sales activities such as customer support); and Rovi's Wayne, Pennsylvania office employs multiple management and administrative employees who contribute to the development and management of Rovi's DI Products. *See* CX-0007C (Putnam WS) at Q/A 99-100; CX-0006C (Bright WS) at Q/A 29-32; CX-1455C (Condensed Guide - Patent Category List). Dr. Putnam also opined that Rovi's investments are significant. CX-0007C (Putnam WS) at Q/A 108-10, 113-14.

The administrative law judge finds that Rovi's R&D expenses, along with its IT and facility expenses, are a significant investment in plant and equipment. *See* CX-0007C (Putnam WS) at Q/A 88-93; CX-1456C (DI Product Financials); CX-0006C (Bright WS) at Q/A 53-57. Further, even if R&D expenses are excluded, Rovi has still shown that its facilities in Burbank, California, Golden, Colorado, Tulsa, Oklahoma, and Wayne, Pennsylvania are a significant investment in plant and equipment.

Accordingly, the administrative law judge has determined that the evidence shows Rovi satisfies the economic prong of the domestic industry requirement under § 337(a)(3)(A).

### **B. Rovi's Employment of Labor or Capital**

#### **1. Labor**

Rovi argues:

. . . Each year from 2012 to 2015, an average of the full-time equivalent of [ ] U.S. Rovi employees worked on Passport and an

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average of the full-time equivalent of [ ] U.S. Rovi employees worked on i-Guide; in 2014, the full-time equivalent of [ ] U.S. Rovi employees worked on TotalGuide xD; and in 2015, the full-time equivalent of [ ] U.S. Rovi employees worked on TotalGuide xD. CX-0007C (Putnam WS) at Q/A 118-20; CX-0006C (Bright WS) at Q/A 58.

... from 2012 to 2015, Rovi spent more than [ ] on labor associated with Passport, and more than [ ] on labor associated with i-Guide, all in the U.S. CX-0007C (Putnam WS) at Q/A 121-24, Table 4; CX-1456C (DI Product Financials); CX-0006C (Bright WS) at Q/A 59-61. And from 2014 to 2015, Rovi spent more than [ ] associated with TotalGuide xD on U.S. labor. CX-0007C (Putnam WS) at Q/A 121-22, 125; CX-0006C (Bright WS) at Q/A 59-61. Each of these expenditures includes R&D, engineering, and tech support; sales and marketing (licensing); and costs of goods sold; including compensation, benefits, and commissions. CX-0007C (Putnam WS) at Q/A 121-22; CX-1456C (DI Product Financials); CX-0006C (Bright WS) at Q/A 60-61.

Rovi Br. at 339-40.

Comcast argues:

- that Rovi's data are unreliable and that Rovi engineers have testified that there are only [ ] employees who work on i-Guide, [ ] employees who work on Passport, and only [ ] in the U.S. that works on TotalGuide xD (Resps. Br. at 364);
- that Rovi failed to allocate its labor costs to the protected articles, because Dr. Putnam "failed to tie any labor costs for IPGs to any particular article that satisfies the technical prong" (Resps. Br. at 365);
- that Rovi's data improperly includes R&D and sales and marketing expenses (this is the same argument made with respect to prong A, above) (Resps. Br. at 365)
- that Rovi's labor costs are unreliable, because Rovi's witnesses could not explain what activities employees whose expenses were reported actually performed (Resps. Br. at 366); and
- that Rovi's labor expenses are not significant in relation to Rovi's overall expenses (Resps. Br. at 367).

Rovi replies that the law does not require proof that its employees engage in specific activities.

Rovi Reply at 127-28 ("Such proof is not required—Rovi presented its domestic industry

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expenses as they are kept in Rovi's ordinary course of business, which is all that the Commission requires.").

The administrative law judge finds that Rovi's R&D, engineering, and tech support expenses are a significant investment in labor. *See* CX-0007C (Putnam WS) at Q/A 121-36 (Rovi has spent over [ ] on labor related to Passport; over [ ] on labor related to i-Guide; over [ ] on labor related to TotalGuide xD); *see also* Resps. Br. at 366 n.100 (reporting for "iGuide, of the [ ] relate to R&D and [ ] relate to Sales & Marketing. For Passport, of the [ ] relate to R&D and [ ] relate to Sales & Marketing. For TotalGuide xD, of the [ ] relate to R&D and [ ] relate to Sales & Marketing. *See* RDX-1502C at 2-3). The cost of goods sold ("COGS") data are unreliable, as no Rovi witness could explain how they relate to this investigation. Tr. 407-410. The magnitude of these expenditures alone is sufficient to constitute a significant employment of labor under § 337 (a)(3)(B). *See Lelo Inc. v. Int'l Trade Comm'n*, 786 F.3d 879, 883 (Fed. Cir. 2015) ("the terms 'significant' and 'substantial' refer to an increase in quantity, or to a benchmark in numbers").

Accordingly, the administrative law judge has determined that the evidence shows Rovi satisfies the economic prong of the domestic industry requirement under § 337(a)(3)(B).

### 2. Capital

Rovi argues:

... U.S. capital expenditures allocated to the DI Products totaled approximately [ ] from 2012-2015. CX-0007C (Putnam WS) at Q/A 138-39. Of this total, [ ] is allocated to Passport, [ ] is allocated to i-Guide, and [ ] is allocated to TotalGuide xD. *Id.* at Q/A 139, Table 5; CX-0006C (Bright WS) at Q/A 52-57; CX-1456C (DI Product Financials). Rovi's capital expenditures with respect to Passport, and with respect to i-Guide, are each significant in relation to Rovi's overall capital

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expenditures and relative to each product. CX-0007C (Putnam WS) at Q/A 140-41. Rovi's capital expenditures with respect to TotalGuide xD, limited to 2014-15, are likewise significant. *Id.* at Q/A 142.

Rovi Br. at 341-42.

Comcast argues:

No evidence shows Rovi made capital expenditures with respect to its IPGs. Dr. Putnam claims [Rovi spent [ ] (2013), and [ ] (2014) on capital expenditures and that Rovi anticipates spending [ ] more in 2016. CX-0007C at Q/A 137. These figures are total companywide capital expenditures from Rovi's annual reports. *See* JX-0036 (Rovi 2012 Form 10-K) at JX-0036.000048, JX-0037 (Rovi 2013 Form 10-K) at JX-0037.000046, and JX-0038 (Rovi 2014 Form 10-K) at JX-0038.000049. But these investments are not limited to the U.S. RX-0852C (Schoettelkotte WS) at Q/A 64. Nor are they investments in protected articles. *Id.* These capital expenditures do not even represent investments in Rovi's IPGs. *Id.* Therefore, these investments are of little relevance, especially given that *Rovi does not even rely on these investments.*

Resps. Br. at 367-68 (emphasis in original).

The administrative law judge finds that Rovi has shown its claimed capital expenditures were made with respect to its IPGs and that the investment was made in the United States, as shown in Dr. Putnam's testimony:

**139. Q: And, in particular, what were Rovi's capital expenditures made in relation the Domestic Industry Products?**

A: Rovi allocates its expenditures on facilities and information technology ("overhead") to the Domestic Industry Products, based on an annual review of its expenditures. Using that method, Rovi spent about [ ] million from 2012-2015 on the Domestic Industry Products, as shown in Table 5.

[

CX-0007C (Putnam WS) at Q/A 139-44. In particular, the [ ] expense for Passport products and the [ ] expense for i-Guide products are each individually significant for a company of Rovi's size, and the sum for all three products is also significant for a company of Rovi's size. See JX-0039 at 37 (reporting annual revenues of approximately \$500M for 2011, 2012, 2013, 2014, and 2015).

Accordingly, administrative law judge has determined that the capital expenses cited are significant under § 337(a)(3)(B).

**C. Rovi's Investment in Exploitation of the Patents, Based on Engineering, Research and Development**

Rovi argues:

. . . Rovi tracks its expenses by "cost centers" associated with R&D and engineering activities, and regularly performs a "Product P&L" process to allocate these expenses to certain products. See CX-0006C (Bright WS) at Q/A 16-17; Bright Tr. 379, 385. Based on these ordinary course allocations, since 2012 Rovi has invested at least approximately [ ] on U.S. R&D activities related to Passport (approximately [ ] annually), and approximately [ ] on U.S. R&D activities related to i-Guide (approximately [ ] annually). . . . And since 2014, Rovi has invested at least approximately [ ] on U.S. R&D activities related to TotalGuide xD (approximately [ ] annually).

Rovi Br. at 343.

Rovi reports its U.S. R&D expenses for the DI products for 2015, as follows:

Rovi Br. at 344.

Comcast argues:

- Rovi did not allocate its investments to protected articles (Resps. Br. at 368);
- Rovi's expenditures are unreliable, because no Rovi witness could explain the activities performed in its R&D cost centers (Resps. Br. at 369-70);
- Rovi has not established a nexus between its R&D and the asserted patents, because its expenses are tied to its IPGs, not the patented features of those products (Resps. Br. at 370); and
- Rovi's expenses are not substantial in context, because "Rovi's declining IPG business and its shifting of investments from those products undermine any suggestion that Rovi's R&D investments for its IPG products are 'substantial.'" (Resps. Br. at 370-73).

The Commission does not adhere to a rigid formula in determining the scope of the domestic industry. *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm'n Op. at 27 (Feb. 17, 2011) (citing *Certain Male Prophylactic Devices*, Inv. No. 337-TA-546, Comm'n Op. at 39 (Aug. 1, 2007) ("*Male Prophylactics*"). The Commission explained that the domestic industry "determination entails 'an examination of the facts in each investigation, the article of commerce, and the realities of the marketplace.' . . . The determination takes into account the nature of the investment and/or employment activities, 'the industry in question, and the complainant's relative size.'" *Id.* (quoting *Male Prophylactics* and *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 26 (May 16, 2008)).



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The administrative law judge finds that Rovi has shown that its investment in research and development is substantial. For example, since 2012, Rovi has spent about [ ] million on R&D related to Passport and about [ ] million on R&D related to i-Guide. Since 2014, Rovi has spent [ ] million on R&D related to TotalGuide xD. *See* CX-0007C (Putnam WS) at Q/A 150-53. These expenses have supported [ ] jobs. *Id.* at Q/A 155-57; CX-1456C (DI Product Financials). Further, Rovi has shown that its expenditures relate to its IPGs, which practice certain of the asserted patents, as discussed above.

Accordingly, the administrative law judge has determined that the evidence shows Rovi satisfies the economic prong of the domestic industry requirement under § 337(a)(3)(C) based on its substantial investment in engineering and research and development.

### **D. Rovi's Investment in Exploitation of the Patents, Based on Licensing**

When a complainant relies on licensing to demonstrate the existence of a domestic industry pursuant to section 337(a)(3)(C) based on licensing, the Commission has explained the showing required of the complainant, as follows:

Complainants who seek to satisfy the domestic industry requirement by their investments in patent licensing must establish that their asserted investment activities satisfy three requirements of section 337(a)(3)(C). First, the statute requires that the investment in licensing relate to "its exploitation," meaning an investment in the exploitation of the asserted patent. 19 U.S.C. § 1337(a)(3)(C) . . . . Second, the statute requires that the investment relate to "licensing." 19 U.S.C. § 1337(a)(3)(C) . . . . Third, any alleged investment must be domestic, *i.e.*, it must occur in the United States. 19 U.S.C. § 1337(a)(2), (a)(3). Investments meeting these requirements merit consideration in our evaluation of whether a complainant has satisfied the domestic industry requirement. Only after determining the extent to which the complainant's investments fall within these statutory parameters can we evaluate whether complainant's qualifying investments are "substantial," as required by the statute. 19 U.S.C. § 1337(a)(3)(C). If a complainant's activity is only partially related to licensing the asserted patent in the United States, the

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Commission examines the strength of the nexus between the activity and licensing the asserted patent in the United States.

*Navigation Devices*, Inv. No. 337-TA-694, Corrected Comm'n Op. at 7-8 (Aug. 8, 2011). One

“potentially important consideration is whether the licensee’s efforts relate to ‘an article protected by’ the asserted patent under section 337(a)(2)-(3).” *Id.* at 10. In addition, the Commission has explained it

may also consider other factors including, but not limited to, (1) the number of patents in the portfolio, (2) the relative value contributed by the asserted patent to the portfolio, (3) the prominence of the asserted patent in licensing discussions, negotiations and any resulting license agreement, and (4) the scope of the technology covered by the portfolio compared to the scope of the asserted patent.

*Id.* In assessing an asserted patent’s value within a portfolio, the Commission looks for evidence that

(1) it was discussed during the licensing negotiation process, (2) it has been successfully litigated before by complainant, (3) it relates to a technology industry standard, (4) it is a base or pioneering patent, (5) it is infringed or practiced in the United States, or (6) the market recognizes its value in some other way.

*Id.* at 10-11.

### 1. Licensing Investment

Assuming that the nexus requirement has been met, the administrative law judge finds that Rovi has invested in licensing the guidance portfolio through labor costs in the U.S. for its licensing team and for overhead expenditures for these employees.

Rovi explains that it has calculated its investment in three ways: the “ordinary course,” which involves data from Kevin Bright, Rovi’s Senior Director of Financial Planning & Analysis, the “Armaly allocation,” and the “Putnam expert analysis.” Rovi Br. at 350-53. Rovi reports its expenses, as follows:

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	<b>1. Bright Data</b>	<b>2. Armaly Allocation</b>	<b>3. Putnam Allocation</b>
<b>Time Frame</b>	2011 – 2Q2016	2015 – 2Q2016	2012-2015
<b>Total \$</b>	[		
<b>Avg \$</b>			]

*See id.* at 353.

Comcast argues that Rovi’s “claimed licensing expenditures have changed dramatically, resulting in readily apparent inconsistencies, and are therefore unreliable and cannot establish a DI.” Resps. Br. at 375.

**a) Bright Data**

Rovi argues:

First, Kevin Bright, Rovi’s Senior Director of Financial Planning & Analysis, testified that Rovi’s patent licensing expenses are kept in the ordinary course of Rovi’s business. CX-0006C (Bright WS) at Q/A 17, 18, 31, 53. While Comcast and its expert dispute whether it was appropriate for Rovi to count litigation and patent prosecution expenses in its licensing expenses, *see* RX-0852C (Schoettelkotte RWS) at Q/A 153, such activities are part and parcel of Rovi’s patent licensing business, and Rovi counts them as licensing expenses in the ordinary course of Rovi’s business. *See* Bright Tr. 393. The Commission has repeatedly found that such expenses may be appropriately counted under prong (C) when, as here, they are paired with other licensing-related investments and activities. . . .

According to Mr. Bright, from 2011 through 2Q of 2016, Rovi has incurred a total of [ ] in U.S. licensing expenditures, of which approximately [ ] was for individuals who are dedicated full-time to patent licensing and [ ] in allocated overhead expenses. CX-0006C (Bright WS) at Q/A 89-90; CX-1480C (Licensing Financials). Rovi’s licensing expenses have increased materially, from [ ] in 2011 to [ ] in 2015 (and [ ] for the first half of 2016). CX-1480C (Licensing Financials). [

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] CX-0006C  
 (Bright WS) at Q/A 90; CX-1480C (Licensing Financials). This  
 large number of individuals who are categorized by Rovi in the  
 ordinary course of business as dedicated to or supported by patent  
 licensing—as well of the expenses related thereto—directly lead to  
 the patent licensing royalties which make up more than [ ] of  
 Rovi's overall revenues.

Rovi Br. at 350-51.

The administrative law judge finds that the Bright Data shows that Rovi invests in licensing the guidance portfolio. [

] See CX-0006C (Bright WS) at Q/A 89-90; CX-1480C

(Licensing Financials). The data also show that Rovi has spent [ ] in allocated overhead expenses. *See id.*

### *b) Armaly Allocation*

Rovi argues:

Second, Samir Armaly, Rovi's Executive Vice President of Intellectual Property and Licensing, provided an alternative, conservative allocation of employee time spent on patent licensing based on his personal experience, discounting activities such as litigation or patent prosecution (which, as noted above, is not required by Commission precedent). CX-0001C (Armaly WS) at Q/A 53; CX-0900C (Armaly Estimate of Patent Licensing Activity); *see also* CX-0006C (Bright WS) at Q/A 95-99. Since 2008, Mr Armaly has led Rovi's patent licensing organization and manages Rovi's patent licensing business through which Rovi offers for license to third parties its patented technology innovations developed over the last several decades. CX-0001C (Armaly WS) at Q/A 5, 6, 18. Mr. Armaly's responsibilities include all aspects related to Rovi's patent licensing business, including (1) development and management of the patent portfolio (both through internal research and development and, where appropriate, acquiring patents from other companies), (2) monetizing Rovi's patent portfolio through third-party licenses, and (3) if necessary, litigation associated with Rovi's patent portfolio when commercial negotiations are not successful, and he

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is responsible for the overall P&L of Rovi's patent licensing business and also advises Rovi's management on legal and strategic issues related to Rovi's patent business. CX-0001C (Armaly WS) at Q/A 5.

Based on Mr. Armaly's calculations, approximately [ ] Rovi employees spent on average [ ] of their time on U.S. patent licensing. CX-0900C (Armaly Estimate of Patent Licensing Activity Allocation); CX-0001C (Armaly WS) at Q/A 53; *see also* CX-0007C (Putnam WS) at Q/A 203, 206-08. Mr. Bright then provided compensation information, kept in the ordinary course of Rovi's business, for these individuals for 2015 and the first half of 2016—noting that over these 18 months, these individuals were paid a total of [ ], approximately [ ] of which was attributable to domestic patent licensing activities based on Mr. Armaly's estimates. CX-0006C (Bright WS) at Q/A 99.

Rovi Br. at 351-52.

The administrative law judge finds that the Armaly allocation shows that Rovi invests in licensing the guidance portfolio. In particular, the data show that Rovi employed about [ ] full-time employees [ ] employees who spent [ ] of their time on U.S. patent licensing) in 2015-16, and it spent approximately [ ] in compensating those employees. *See* CX-0006C (Bright WS) at Q/A 99; CX-0900C (Armaly Estimate of Patent Licensing Activity Allocation); CX-0001C (Armaly WS) at Q/A 53.

### *c) Putnam Allocation*

Rovi argues:

[

]

Rovi Br. at 352-53.

Comcast argues that Dr. Putnam's testimony is unreliable because he "failed to account for Mr. Armaly's (or Mr. Bright's) testimony or explain how he de-allocated from Rovi's initial or updated claimed expenditures." Resps. Br. at 374-75. Comcast also points to inconsistencies between figures and analysis provided at different points throughout the investigation. *Id.*

The administrative law judge finds that the Putnam allocation shows that Rovi invests in licensing the guidance portfolio. In particular, the data show that Rovi employed [

]

## 2. Substantiality of Licensing Investment

In assessing substantiality of a licensing investment, the Commission considers: (1) the nature of the industry and the resources of the complainant; (2) the existence of other types of exploitation activities; (3) the existence of license-related “ancillary” activities; (4) whether complainant’s licensing activities are continuing; (5) whether complainant’s licensing activities are the type of activities that are referenced favorably in the legislative history of section 337(a)(3)(C); and (6) the complainant’s return on its licensing investment. *See Navigation Devices*, Comm’n Op. at 15-16. There is no minimum monetary expenditure that a complainant must demonstrate to qualify as a domestic industry under the ‘substantial investment’ requirement” of section 337(a)(3)(C). *See Stringed Musical Instruments*, Comm2008 WL 2139143 at \*14.

This is Rovi’s argument:

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However measured, Rovi's investments in licensing its guidance patent portfolio are *at least* [ ] million dollars per year. Any alleged weakness in the nexus of these licensing investments to the Asserted Patents is far outweighed by these investments' clear substantiality. *Navigation Devices*, Inv. No. 337-TA-694, Comm'n Op. at 25.

Whether measured by (1) Rovi's ordinary course documents [the Bright data], (2) Mr. Armaly's alternative estimates, or (3) Dr. Putnam's independent analysis based on (1) and (2), these licensing activities and related investments are indisputably of a large magnitude, generate more than half of Rovi's revenues, and are substantial within the meaning of Section 337(a)(2)-(3).

Rovi Br. at 362-63.

Within the *Navigation Devices* framework, Comcast argues that Rovi has not shown the investments are substantial. Resps. Br. at 387-90.

***a) Nature of the Industry and Complainant's Resources;***

In *Liquid Crystal Display Devices*, the administrative law judge found the complainant's investments were significant in part because they had successfully licensed the portfolio at issue to "a large portion of the industry." *Liquid Crystal Display Devices*, Comm'n Op. at 123.

Comcast argues that Rovi's expense are not substantial in relation to its total expenses and because Mr. Armaly has split time between different licensing efforts. *See* Resps. Br. at 388.

Here, the evidence shows that Rovi has licensed its portfolio to a nearly the entire pay-TV industry. *See* CX-0896C; CX-0001C at Q/A 30; CX-0007C (Putnam WS) at Q/A 196. Accordingly, the administrative law judge has determined that this factor supports a finding that the investments are substantial, as nearly the entire industry has licensed Rovi's portfolio.



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### ***b) Other Types of Exploitation Activities;***

In addition to Rovi's expenditures on compensation and overhead related to licensing the guidance portfolio, described above, Rovi makes investments in plant and equipment and employs labor and capital to exploit the asserted patents through research and development for various products, including the TotalGuide products.

This factor favors finding that Rovi's investment is substantial.

### ***c) Existence of License-related "Ancillary" Activities;***

Rovi has not addressed ancillary activities. *See generally* Rovi Br., Section IX(C)(4)(e). Accordingly, this factor does not support a finding that Rovi's investment is substantial.

### ***d) Continuing Licensing Activities***

Comcast argues:

Considering that Rovi has licenses with nearly all of the other major Pay-TV providers (besides Comcast), whether Rovi's continuing domestic licensing-related activities will be substantial remains unclear, especially given the declining market for Rovi's IPG products.

Resps. Br. at 389.

Rovi has not addressed this factor, although the administrative law judge is aware of parallel litigation pending in district court. *See generally* Rovi Br., Section IX(C)(4)(e). There is no indication that Rovi has stopped filing IPG patent applications. Further, given that Rovi has licensed almost all of the industry, this factor does not necessarily carry much significance as it might for licensors who have licensed only a minority of the industry.

This factor does not support a finding that Rovi's licensing investment is substantial.

### ***e) Referenced Favorably in the Legislative History***

Comcast argues:

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The Commission has identified two types of “licensing” activities: (1) production-driven activities and (2) revenue-driven activities, the latter which are accorded less weight. *See Navigation Devices*, Comm’n Op. at 25 n.20 (citation omitted). Rovi’s licensing activities are revenue-driven. Dr. Putnam admits “some of Rovi’s licensing is, of course, ‘revenue-oriented[.]’” CX-0007C (Putnam WS) at Q/A 306. Dr. Putnam also admits Rovi’s licensing program is primarily targeted at “Tier One” subscription-TV service providers, which are Rovi’s most profitable negotiations. *See id.* at 231. Rovi’s Tier One program targets the **renewal** of agreements, reflecting that Rovi’s activities are revenue-driven because Tier One providers’ “production” already exists. For example, in June 2015, Rovi explained that renewals represented the largest opportunity for the company. RX-0017C (IP & Licensing Presentation) at RX-0017C.0021. Thus, the evidence shows Rovi’s activities are revenue-driven and therefore should be given less weight. *See Navigation Devices*, Comm’n Op. at 25.

Resps. Br. at 389-90.

As shown in the domestic industry and the reviews of Rovi’s licensing revenue, the administrative law judge has determined that Rovi is engaged in both production-driven and revenue-driven licensing.

Accordingly, the administrative law judge finds that factor is neutral.

### *f) Return on Licensing Investment*

Comcast argues that Rovi’s revenue is due to the portfolio, not the asserted patents.

Resps. Br. at 390-91 (“Rovi’s revenue is derived from its portfolio as a whole rather than any individual patents.”).

The evidence shows that between “2010 and 2015, Rovi’s patent licenses generated Rovi close to [ ] in revenue.” Rovi Br. at 3 (citing CX-0007C (Putnam WS) at Q/A 86; CX-0828C (Rovi Income Statement Charts) at 4).

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Although the royalties received under a license “do not constitute the investment itself,” they do constitute circumstantial evidence that a substantial investment was made. *Navigation Devices*, Comm’n Op. at 24.

This factor favors finding that Rovi’s investment is substantial.

### *g) Conclusion*

Assuming that the nexus requirement is met, the administrative law judge finds that, taken as a whole, Rovi’s investment in licensing the asserted patents is substantial.

## **3. Nexus Requirement**

### *a) The Number of Patents in the Portfolio*

Comcast argues:

Dr. Putnam has no opinion on this factor, Tr. 422:20-423:4, which he completely failed to evaluate. *See* RX-0852C (Schoettelkotte RWS) at Q/A 95. Yet the large number of patents in the portfolio weighs against a nexus. “All things being equal, the nexus between licensing activities and an asserted patent may be stronger when the asserted patent is among a relatively small group of licensed patents.” *Navigation Devices*, Comm’n Op. at 11. The Asserted Patents are part of a huge portfolio [

] This factor weighs strongly against a nexus.

Resps. Br. at 376-77.

The evidence shows that Rovi licenses its patents on a portfolio basis. CX-0001C at Q/A 28, 31 (Rovi and licensees “negotiate a portfolio-wide license that includes all patents in the guidance portfolio”). [

]

Assuming all other factors are equal, the large number of patents in the portfolio, compared to the relatively minute number of asserted patents, suggests that the asserted patents do not have a nexus to the asserted patents. Accordingly, the administrative law judge finds that this factor weighs against finding a nexus.

***b) The Relative Value Contributed by the Asserted Patents to the Portfolio***

Rovi generally does not address each patent individually. *See* Rovi Br. at 355-61 (Section IX(C)(4)(d)(iii)). Nonetheless, Rovi argues that it discussed the asserted patents during licensing negotiations, Rovi's *portfolio* is a "de facto" standard, that patent citation data indicates the patents are "base or pioneering" patents, and that the market has recognized the patents' value in other ways. *Id.*

Likewise, Comcast also does not address each patent individually. *See generally* Resps. Br. at 375 (Section (E)(2)(a)(ii)).

***(1) Discussed During Licensing Negotiations***

In general, each of the asserted patents was discussed during prior negotiations with [ ]—prominent entities in the pay-TV market. *See* CX-0001C (Armaly WS) at Q/A 74-88; CX-0896C (Rovi Patents Identified to Licenses Chart). Rovi illustrates its point with the following table:

[

See Rovi Br. at 356 (citing CX-0001C (Armaly WS) at Q/A 74-88; CX-0896C (Rovi Patents Identified to Licenses Chart)).

Comcast argues that the asserted patents “were not featured prominently in negotiations.” Resps. Br. at 377. Comcast argues that the asserted patents were not presented to numerous other licensees.

The administrative law judge has determined that Rovi has shown the accused patents were presented in licensing negotiations. See CX-0896C. Accordingly, this factor weighs in Rovi’s favor.

(2) *Prior Successful Litigation*

None of the asserted patents have been asserted in prior litigations. See CX-0007C (Putnam WS) at Q/A 243. This factor carries a little weight against finding any particular patent has value, particularly where Rovi has engaged in IPG-related litigation prior to this lawsuit. *E.g., Netflix v. Rovi*, 114 F. Supp. 3d 927 (N.D. Cal. 2015); *IPGs and Parental Controls*, Inv. No. 337-TA-845.

(3) *Relation to Technology/Industry Standard*

Rovi argues that its *portfolio* is a “de facto” standard in the pay-TV industry, and that this reflects “widespread appreciation of the Asserted Patents’ importance and value.” Rovi Br. at 359. Comcast argues that Dr. Putnam and Mr. Armaly admitted that there is no standard for IPGs. See Resps. Br. at 379-80 (citing CX-0007C (Putnam WS) at Q/A 247 (“[T]he Asserted

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Patents themselves are not ‘standard-essential patents.’”); Tr. 426; Tr. 105-106; JX-0087C (Armaly Dep. Tr.) at 224).

The administrative law judge finds that Rovi has not shown the asserted patents have any nexus to an industry standard. Indeed, Rovi’s argument relates its portfolio, not the asserted patents, to an imaginary standard. Accordingly, this factor weighs against finding that the asserted patents have significant relative value.

### (4) *Base or Pioneering Patent*

Rovi relies on testimony from Mr. Armaly and a patent-citation analysis from Dr. Putnam to argue that the asserted patents are base or pioneering patents. Rovi Br. at 359 (citing CX-0001C (Armaly WS) at Q/A 11-13, 17; CX-0007C (Putnam WS) at Q/A 249-56).

Mr. Armaly testified in general terms that IPGs were first developed in the late 1980’s:

**Q12. You described the evolution from printed program guides to IPGs on the consumer electronics device. When were IPGs first developed?**

A. IPG technology was first developed in the late 1980s and early 1990s and has continued to evolve to provide users with access to program information, and in some cases, other features and functionality that facilitate the use and enjoyment of video programming. An early type of IPG was a full-screen “grid guide” that displayed television program listings by time and channel in a two-dimensional grid. The features and functions available through IPGs today are far more extensive and sophisticated.

CX-0002C at Q/A 12. The cited testimony (Q/A 11-13, 17) does not refer to the asserted patents, and it does not explain how those patents were base or pioneering over predecessor technology. At the hearing, Mr. Armaly admitted that no documents or industry statements support his claim that the Asserted Patents are “foundational” in nature. *See* Tr. 105.

Dr. Putnam’s citation analysis is limited to three patents, the ‘556, ‘801, and ‘263 Patents. *See* CX-0007C (Putnam WS) at Q/A 254. The ‘801 Patent shares “essentially the same

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specification” as the ‘263 Patent. *See* Resps. Br. at 63; *see also* Rovi Br. at 41 (explaining the patents “stem from a common, parent application filed on July 16, 1999”). Further, accepting Dr. Putnam’s analysis would require the administrative law judge to agree with the analysis’s definition of “base” and how it is measured (with patent citation data alone). *See* CX-0007C (Putnam WS) at Q/A 251-53, 263. Rovi does not point to any tribunals that have accepted patent-citation analysis testimony as an indicator of value, and during cross examination Dr. Putnam testified that he did not address one article because it involved a particular assumption about innovation and weighted patent counts. *See* Tr. 1256-1257 (discussing RX-0794, Abrams et al., *Understanding the Link Between Patent Value and Citations*).

The lack of technical testimony and the lack of other extrinsic, objective evidence relevant to the base or pioneering nature of any of the asserted patents is a significant obstacle to Rovi’s argument. Dr. Putnam’s patent-citation analysis, while interesting, does not provide a sufficient basis to conclude that the patents are “base or pioneering” given the lack of corresponding technical testimony and extrinsic evidence. Accordingly, the administrative law judge has determined that Rovi has not shown that any of the asserted patents are base or pioneering patents for purposes of the *Navigation Devices* analysis.

### (5) *Infringed or Practiced in the United States*

Rovi argues:

A wide variety of set-top boxes used throughout the industry—not just those imported by Respondents—practice the Asserted Patents. CX-0007C (Putnam WS) at Q/A 245; CX-0001C (Armaly WS) at Q/A 24-27. As the vast majority of the U.S. Pay-TV industry has taken a license to the Asserted Patents, it is reasonable to conclude that a large number of Rovi’s licensees practice the Asserted Patents. CX-0007C (Putnam WS) at Q/A 245. Due to the widespread licensing of Rovi’s guidance portfolio, and the desirability of the features claimed in the Asserted Patents,

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widespread use of the Asserted Patents is very likely, supporting the finding of a nexus here. *Id.*

Rovi Br. at 361.

Comcast argues that no party has been found to infringe the asserted patents and that Rovi has only attempted to show that three licensees practice the asserted patents. *See* Resps. Br. at 380.

The administrative law judge has determined that the ‘263, ‘413, and ‘512 Patents are infringed or practiced in the United States. *See* Sections V(B), V(E), V(F). Accordingly, this factor weighs in favor of finding that the ‘263, ‘413, and ‘512 Patents have relative value within the portfolio.

### (6) *Other Recognition of Value*

Rovi argues that its patent-citation analysis also shows that the market recognizes the value of the asserted patents. Rovi Br. at 360. Rovi argues “Dr. Putnam factored in citation data and other economic considerations, such as mentions in licensing negotiations, to determine that the Asserted Patents fall in the [ ] *Id.* Dr. Putnam’s analysis comments that the [ ] *Id.*

] *Id.*

Comcast argues that “Mr. Schoettelkotte identifies multiple flaws with Dr. Putnam’s methodology and results.” Resps. Br. at 381 (citing RX-0852C (Schoettelkotte RWS) at Q/A 123-130). Comcast critiques Dr. Putnam’s methodology insofar as it relies “heavily” on self-citations and also notes that Dr. Putnam only ranked three of the asserted patents. *Id.* Comcast further notes that “a patent Dr. Putnam ranked seventh highest was found in Inv. No. 337-TA-845 to have a **weak nexus** to Rovi’s licensing activities.” *Id.* (emphasis added by Comcast).



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Further, Comcast has pointed to statements by Mr. Armaly commenting that Rovi's portfolio is not as susceptible to challenges given its size:

Ultimately one of the advantages that Rovi has in this area [of *Alice* challenges] is the size and the state of our patent portfolio. Companies with only handful of patents or with only issued patents without pending applications would likely have more risk under the new *Alice* test. This is simply not the position that Rovi is in.

...

[in commenting on a litigation involving Netflix, Mr. Armaly said:] As quick reminder only 5 patents in our portfolio are at issue in this case and Rovi's portfolio includes more than 5,000 issued patents and pending applications around the world. Please remember that it only takes claim of patent to survive for us to be able to prevail in this litigation. And we have an extensive portfolio of additional patents that we can litigate on should that be necessary to drive an acceptable resolution.

RX-0611 at 8. These statements indicate that Rovi itself believes the market recognizes the value of its portfolio, not the value of a handful of particular patents.

Dr. Putnam's analysis does not sufficiently separate value of the asserted patents from the value of the portfolio because there is no assessment of whether other patents (or sub portfolios) in the portfolio are driving the value that is reflected in the royalties paid. For example, Dr. Putnam's analysis approaches an invention about tuner conflicts (the '512 Patent) in the same way it approaches an invention about remote access functionality (e.g., the '263 and '413 Patents) when these patents are clearly of different value. Further, Dr. Putnam's analysis does not analyze three of the asserted patents.

Accordingly, the administrative law judge has determined that Rovi has not shown that the asserted patents have recognized relative value apart from the portfolio.

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### (7) *Conclusion on the Relative Value*

While the asserted patents were discussed during licensing negotiations and three of the patents were found infringed or practiced, the remaining factors either are neutral, and do not support Rovi's argument, or weigh against finding that the asserted patents have a significant relative value. Accordingly, this factor does not support a nexus.

#### c) *The Prominence of the Asserted Patent in Licensing Discussions, Negotiations and any Resulting License Agreement*

Rovi argues that the asserted patents were featured prominently in negotiations:

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Rovi Br. at 358. Rovi also relies on “call outs” (*i.e.*, high-level infringement charts) involving the asserted patents. *See id.* (citing CX-0001C (Armaly WS) at Q/A 80; CX-0739C (Roadmap for Verizon)).

Comcast argues that Rovi should have examined all of its negotiations and that doing so would have “reached quite reached quite a different conclusion.” Resps. Br. at 377 (citing RX-0852C (Schoettelkotte RWS) at Q/A 101-111). Comcast also notes that:

[

] Rovi attempts to explain the value of its portfolio as opposed to the value of individual patents and believes that the breadth and depth of Rovi's portfolio as a whole puts Rovi in a good position. *See id.*; *see also* Tr. 102:25-104:22. Comcast's Mr. Marcus confirmed no individual Rovi patent or group of patents was presented to Comcast as more valuable than any other. *See* RX-0001C (Marcus WS) at Q/A 36-51.

*Id.* at 378 (emphasis in original, footnote omitted).

The administrative law judge has determined that the evidence does not show the asserted patents were particularly prominent in discussions, negotiations, or in any subsequent licenses. Simply put, the frequency that Rovi selected a given patent alone is not enough to conclude that stood out in a meaningful way, particularly in light of Mr. Armaly's comments about the value of Rovi's portfolio. *See* RX-0611 at 8.

Accordingly, this factor does not support finding a nexus.

***d) The Scope of the Technology Covered by the Portfolio Compared to the Scope of the Asserted Patents***

Comcast argues that the scope of the patents is narrow in relation to the scope of the portfolio: "Rovi's portfolio covers all different types of devices, including televisions, STBs, mobile devices, tablets, PCs, as well as different types of technologies, including linear programming, DVRs, video-on-demand, TV Everywhere, and over-the-top streaming." Resps. Br. at 383 (citing RX-0609 (2014 Shareholder Call) at 8).

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Rovi has not addressed the scope of its portfolio in relation to the scope of the asserted patents. *See generally* Rovi Br., Section IX(C)(4) (“scope” is not discussed), Rovi Reply, Section X (same).

The administrative law judge has determined that the scope of the asserted patents is narrow relative to the scope of the portfolio, which includes diverse technologies such as televisions, STBs, mobile devices, tablets, PCs, as well as different types of technologies, including linear programming, DVRs, video-on-demand, TV Everywhere, and over-the-top streaming. Accordingly, this factor does not support a nexus.

### *e) Conclusion on Nexus*

The administrative law judge has determined that Rovi has not shown a nexus between its activities and licensing the asserted patent in the United States. The high number of patents in Rovi’s portfolio, the lack of relative value of the asserted patents, and the lack of a showing pertaining to the scope of the patents in comparison to the portfolio are significant obstacles to finding a nexus.

Accordingly, the administrative law judge has determined that Rovi has not shown a domestic industry based on licensing under section 337(a)(3)(C).

### **E. Rovi’s Domestic Industry Based on Verizon Investments**

Rovi argues that Verizon has made significant domestic investments in plant and equipment and significantly employed labor and capital relating to products that practice the asserted patents that independently satisfy the economic prong of the domestic industry requirement. *See* Rovi Br. at 363.

#### **1. Investment in Plant and Equipment**

For Verizon plant and equipment, Rovi argues:

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Verizon has invested at least \$23 billion in development of the FiOS service in the U.S. since 2004, and in 2016 announced its plan to continue capital expenditures on FiOS. CX-0249 (Verizon 2015 10-K); CX-0007C (Putnam WS) at Q/A 321; CX-1937C (2nd Errata to Putnam WS). As of July 2016, Verizon had invested an average of [ ] in equipment costs per home passed over the last year between the New England, New York, and Mid-Atlantic regions alone. CX-0221C (FiOS Profitability Analysis); CX-0249 (Verizon 2015 10-K); CX-0007C (Putnam WS) at Q/A 322; CX-1937C (2<sup>nd</sup> Errata to Putnam WS). These massive investments in equipment relating to products and services which practice each of the Asserted Patents are clearly significant in relation to Verizon's business and product lines, satisfying the economic prong of the domestic industry requirement under § 337(a)(3)(A). CX-0007C (Putnam WS) at Q/A 326 27.

Rovi Br. at 364.

For Verizon plant and equipment, Comcast argues:

Rovi failed to show that Verizon made investments under Prongs A or B. Rovi failed to show how Verizon's alleged overall investments relate to protected articles. Dr. Putnam claims that "Rovi contends that certain Verizon STBs used in the provision of Verizon's FiOS Pay-TV services practice certain claims of each of the Asserted Patents." CX-0007C (Putnam WS) at QA 319. Dr. Putnam identified certain Verizon STBs as "DI products," (*Id.* at QA 73), but none of Verizon's investments are tied to those (or any) particular products. The only financial document Dr. Putnam cites in his discussion is a Verizon 2015 Annual Report. *See id.* at QA 318-327 (citing CX-0249 (Verizon 2015 Form 10-K) in QA 325).

Dr. Putnam simply concludes that Verizon's average investment of [ ] per subscribing home over the last year ending July 2016 satisfies Prong A. *Id.* at QA 327. Dr. Putnam provides no evidentiary support or analysis for his claim. For example, Dr. Putnam fails to determine what portion of Verizon's alleged investments could be allocated to the Verizon STB products he identifies. *See id.* at QA 73; *see also* Tr. 402:7-18 (Dr. Putnam admitting he did not know which particular Verizon STBs actually implement the Rovi IPG products, nor did he determine "set-top-specific investments" but instead relied upon "ecosystem-level investments").

Resps. Br. at 390-91.

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The administrative law judge finds that the evidence Rovi relies upon does not establish a domestic industry for purposes of § 337(a)(3)(A). Rovi's suggestion of attributing \$23 billion in investment for the Verizon FiOS network—a number that captures Verizon's fiber optic network and corporate acquisition funds, *see* CX-0007C (Putnam WS) at Q/A 321—to the asserted patents (*i.e.*, program guides and set-top boxes) is simply not supported, as Rovi has not shown a plausible basis for concluding that the six asserted patents are responsible for investment of this type. Further, Rovi's arguments and evidence are not sufficiently tied to the protected articles. For instance, Dr. Putnam testified that his analysis was tied to “ecosystem-level investments.” *See* Tr. (Putnam) at 402. On the whole, the evidence is too weak to support a finding that the above Verizon investments constitute an independent domestic industry.

### 2. Employment of Labor or Capital

For Verizon labor or capital, Rovi argues:

In addition to the above investments in plant and equipment, Verizon has made additional significant investments in labor and capital to support its patent-practicing FiOS products and services. Between January 2016 and July 2016, Verizon spent about [

]. These represent significant investments in the employment of labor capital relating to the patent-practicing FiOS products under § 337(a)(3)(B), such that Verizon's activities satisfy the economic prong of the domestic industry requirement. CX-0007C (Putnam WS) at Q/A 326-27.

Rovi Br. at 364.

For Verizon labor or capital, Comcast argues:

... Similarly, Dr. Putnam simply concludes that Verizon's \$23B investment in the development of FiOS since 2004 [

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] Dr. Putnam provides no evidentiary support or analysis for his claim. For example, Dr. Putnam fails to determine what portion of the alleged investments could be allocated to the Verizon STBs he identifies. *See id.* at QA 73; *see also* Tr. 402:7-18 (admitting he did not know which particular Verizon STBs actually implement the Rovi IPG products, nor did he determine “set-top-specific investments” but instead relied upon “ecosystem-level investments”).

Resps. Br. at 390-91.

The administrative law judge finds that the evidence Rovi relies upon does not establish a domestic industry for purposes of § 337(a)(3)(B). Rovi’s suggestion of attributing large amounts of “construction labor per home” from the Verizon FiOS network to the asserted patents (*i.e.*, program guides and set-top boxes) is simply not supported, as Rovi has not shown a plausible basis for concluding that the six asserted patents are responsible for investment of this type. Further, Rovi’s arguments and evidence are not sufficiently tied to the protected articles. For instance, Dr. Putnam testified that his analysis was tied to “ecosystem-level investments.” *See* Tr. (Putnam) at 402. On the whole, the evidence is too weak to support a finding that the above Verizon investments constitute an independent domestic industry.

### **F. Rovi’s Domestic Industry Based on SuddenLink Investments**

Rovi argues that SuddenLink has made significant domestic investments in plant and equipment and significantly employed labor and capital relating to products that practice the asserted patents that independently satisfy the economic prong of the domestic industry requirement. *See* Rovi Br. at 364-65.

#### **1. Investment in Plant and Equipment**

For SuddenLink plant and equipment, Rovi argues:

Suddenlink invests heavily in its Pay-TV services and equipment, which use the Asserted Patents to deliver content to Suddenlink’s customers. At least [ ] set-top boxes have

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utilized Rovi's A28 or Firefly i-Guide interactive program guides, each of which practice each of the Asserted Patents. CX-0007C (Putnam WS) at Q/A 330. These purchases indisputably relate to "equipment" within the meaning of Section 337(a)(3)(A). *See* Schoettelkotte Tr. 601-02. This significant investment by Suddenlink in equipment embodying the Asserted Patents satisfies the economic prong of the domestic industry requirement under § 337(a)(3)(A). CX-0007C (Putnam WS) at Q/A 334-35.

Rovi Br. at 365.

For SuddenLink plant and equipment, Comcast argues:

Rovi failed to show that Suddenlink made investments under Prongs A or B. Rovi failed to show how Suddenlink's overall investments relate to protected articles. Dr. Putnam claims that "Rovi contends that certain STBs used in the provision of SuddenLink's Pay-TV services utilize Rovi's i-Guide software, and therefore practice certain claims of certain of the Asserted Patents." CX-0007C (Putnam WS) at QA 330. Dr. Putnam identified certain STBs as "DI products," (*Id.* at QA 73), but none of the Suddenlink investments are directed to those or other products. Dr. Putnam only cites are annual or quarterly reports of Cequel Communications (Suddenlink's parent). *See id.* at QA 328-336 (citing CX-0235 (Cequel 2011 Annual Report), CX-0236 (Cequel 2012 Annual Report), CX-0237 (Cequel 2013 Annual Report), CX-0238 (Cequel 2014 Annual Report), and CX-0250 (Suddenlink Q3 and YTD 2015 Results)).

Dr. Putnam claims Suddenlink's purchase of at least [ ] allegedly using Rovi's i-Guide satisfies Prong A. *See* CX-0007C (Putnam WS) at QA 330 and 335. Dr. Putnam provides no evidentiary support for this figure, nor provides an actual monetary amount of Suddenlink's alleged investment. *See id.* And, for example, Dr. Putnam fails to determine what portion of the alleged investments could be allocated to the Suddenlink STBs he identifies. *See id.* at QA 73; *see also* Tr. 402:9-18 (Dr. Putnam admitting he did not know which particular Suddenlink STBs actually implement the Rovi IPG products, nor did he determine "set-top-specific investments" but instead relied upon "ecosystem-level investments").

Resps. Br. at 392.

The administrative law judge finds that the evidence Rovi relies upon does not establish a



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domestic industry for purposes of § 337(a)(3)(A). Rovi has not provided evidentiary support to establish the sales of the set-top boxes or financial data to demonstrate the investment was significant. *See, e.g.*, Tr. at 401-403 (Dr. Putnam did not “associate any investment of any kind whatsoever to any specific Suddenlink set-top box”). On the whole, the evidence is too weak to support a finding that the above SuddenLink investments constitute an independent domestic industry.

### 2. Employment of Labor or Capital

For SuddenLink labor or capital, Rovi argues:

In addition to its significant investments in plant and equipment, Suddenlink employs significant labor and capital to support its Pay-TV products and services embodying the Asserted Patents. First, SuddenLink’s purchases of its [ ] set-top boxes utilizing Rovi’s A28 or Firefly i-Guide IPGs constitute significant capital expenditures relating to patent-practicing products, satisfying the economic prong of the domestic industry requirement. *See* Schoettelkotte Tr. 602-03. Furthermore, in the past five years, SuddenLink has invested at least \$2.9 billion in programming costs, which represent capital investments contributing to the development of its television and video products. CX-0007C (Putnam WS) at Q/A 331-32. These products are used to provide cable and streaming services exclusively to customers located within the U.S., including basic, digital, premium, video-on-demand and pay-per-view programming provided to both residential and commercial customers. *Id.* SuddenLink also launched its SuddenLink2GO mobile app in early 2014, which allows customers to access live TV and on-demand TV shows from their mobile devices. *Id.* From 2011 through 2015, approximately 1.1 million customers subscribed to SuddenLink’s television and video services, generating an average of \$1.1 billion per year in revenues. *Id.* at Q/A 331-32. Suddenlink’s \$2.9 billion capital investment in products and services practicing the Asserted Patents clearly qualifies as significant employment of capital under § 337(a)(3)(B), such that Suddenlink’s activities satisfy the economic prong of the domestic industry requirement. *Id.* at Q/A 334-35.

Rovi Br. at 365-66.

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For SuddenLink labor or capital, Comcast argues:

For Prong B, Dr. Putnam claims that in the past five years, Suddenlink has invested at least \$2.9B in programming costs, which contributed to the development of its television and video products. *See id.* at QA 331. However, Suddenlink's programming costs consist primarily of costs paid to programmers for basic, digital, premium, video on demand and pay-per-view programming. *See* CX-0239 (Cequel 2015 Annual Report) at CX-0239.000051. As such, these expenses are not directed to any Suddenlink investment (significant or otherwise) in labor or capital. Moreover, Dr. Putnam fails to determine what portion of the alleged investments could be allocated to the Suddenlink STBs he identifies. *See* CX-0007C (Putnam WS) at QA 73; *see also* Tr. 402:9-18 (Dr. Putnam admitting he did not know which particular Suddenlink STBs actually implement the Rovi IPG products, nor did he determine "set-top-specific investments" but instead relied upon "ecosystem-level investments").

Resps. Br. at 392-93.

The administrative law judge finds that the evidence Rovi relies upon does not establish a domestic industry for purposes of § 337(a)(3)(B). Rovi's suggestion of attributing \$2.9 billion of costs that primarily relate to programming (basic, digital, premium, video-on-demand and pay-per-view) to the asserted patents (*i.e.*, program guides and set-top boxes) is simply not supported, as Rovi has not shown a plausible basis for concluding that the six asserted patents are responsible for investment of this type. Further, Rovi's arguments and evidence are not sufficiently tied to the protected articles. For instance, Dr. Putnam testified that his analysis was tied to "ecosystem-level investments." *See* Tr. (Putnam) at 402. On the whole, the evidence is too weak to support a finding that the above SuddenLink investments constitute an independent domestic industry.

\* \* \*

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### **VII. CONCLUSIONS OF FACT AND LAW**

#### **Jurisdiction and Importation**

- 1) The Commission has personal jurisdiction in this investigation.
- 2) The Commission has subject matter jurisdiction in this investigation.
- 3) The Commission has *in rem* jurisdiction in this investigation.
- 4) ARRIS is an importer of the accused products that it manufactures, under 19 U.S.C. § 1337(a)(1)(B).
- 5) Technicolor is an importer of the accused products that it manufactures, under 19 U.S.C. § 1337(a)(1)(B).
- 6) Comcast is sufficiently involved in the importation of the accused products that it satisfies the importation requirement, under 19 U.S.C. § 1337(a)(1)(B). Comcast does not sell the accused products for importation, and it does not sell the accused products after importation, under 19 U.S.C. § 1337(a)(1)(B).
- 7) Rovi possesses all substantial rights in the asserted patents and has standing to bring its complaint before the Commission.

#### **X1 Products**

- 8) The ARRIS XG1v3 (X1) AX013ANC is a representative product (DVR-enabled) for all of the asserted patents.
- 9) The Pace XiD (PXD01ANI) is a representative of the non-DVR X1 set-top boxes analyzed for U.S. Patent No. 8,566,871.
- 10) The accused X1 products have been imported into the United States.
- 11) The accused X1 products infringe claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263 and claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413 under 35 U.S.C. § 271(a).
- 12) The accused X1 products do not infringe any asserted claim of U.S. Patent Nos. 6,418,556, 8,046,801, 8,566,871, and 8,621,512.
- 13) With respect to the accused X1 products, Comcast has induced its customers to infringe claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263 and claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413 under 35 U.S.C. § 271(b).
- 14) With respect to the accused X1 products, Comcast has not induced its customers to infringe any asserted claim of U.S. Patent Nos. 6,418,556, 8,046,801, 8,566,871, and 8,621,512.

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- 15) With respect to the accused X1 products, Comcast has not induced ARRIS or Technicolor to infringe under 35 U.S.C. § 271(b).
- 16) With respect to the accused X1 products, ARRIS and Technicolor are not contributory infringers under 35 U.S.C. § 271(c).

### **Legacy Products**

- 17) The Motorola DCX3501/M is a representative product for all of the patents it is alleged to infringe.
- 18) The accused Legacy products have been imported into the United States.
- 19) The accused Legacy products infringe claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263; claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413; and claims 1, 10, 13, and 22 of U.S. Patent No. 8,621,512 under 35 U.S.C. § 271(a).
- 20) The accused Legacy products do not infringe any asserted claim of U.S. Patent Nos. 6,418,556 and 8,046,801. (Rovi has not accused the Legacy products of infringing U.S. Patent No. 8,566,871.)
- 21) With respect to the accused Legacy products, Comcast has induced its customers to infringe claims 1, 2, 14, and 17 of U.S. Patent No. 8,006,263 and claims 1, 3, 5, 9, 10, 14, and 18 of U.S. Patent No. 8,578,413.
- 22) With respect to the accused Legacy products, Comcast has not induced its customers to infringe any asserted claim of U.S. Patent Nos. 6,418,556, 8,046,801, and 8,621,512. (Rovi has not accused the Legacy products of infringing U.S. Patent No. 8,566,871.)
- 23) With respect to the accused Legacy products, Comcast has not induced ARRIS or Technicolor to infringe under 35 U.S.C. § 271(b).
- 24) With respect to the accused Legacy products, ARRIS and Technicolor are not contributory infringers under 35 U.S.C. § 271(c).

### **Design Arounds and Additional Non-Infringement Arguments**

- 25) Comcast's proposed design arounds for U.S. Patent Nos. 6,418,556 and 8,566,871 are too hypothetical to adjudicate.
- 26) Comcast's proposed design around for the X1 system, for U.S. Patent No. 8,621,512, does not infringe the Patent.
- 27) Comcast's proposed design around for the Legacy system, for U.S. Patent No. 8,621,512, is too hypothetical to adjudicate.

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- 28) Comcast's proposed design arounds for the X1 and Legacy systems, for U.S. Patent Nos. 8,006,263, 8,046,801, and 8,578,413, infringe those patents.

### Patent Eligibility and Validity

- 29) Comcast has not shown by a preponderance of the evidence, or through clear and convincing evidence, that the asserted claims of the patents in suit are ineligible for patenting under 35 U.S.C. § 101.
- 30) Comcast has not shown, through clear and convincing evidence, that the asserted claims of the U.S. Patent Nos. 6,418,556; 8,006,263; 8,046,801; 8,566,871; and 8,578,413 are invalid under 35 U.S.C. §§ 102, 103, or 112.
- 31) Comcast has shown, through clear and convincing evidence, that claims 1, 10, 13, and 22 U.S. Patent No. 8,621,512 are invalid under 35 U.S.C. § 103, in light of Nagano (RX-0153), in view of the general knowledge of a person of ordinary skill in the art, and/or Sano (RX-0152) or Chun (RX-0158). The proffered objective evidence of non-obviousness does not support a finding that the Patent is not obvious.
- 32) Comcast has not shown, through clear and convincing evidence, that the asserted claims of U.S. Patent No. 8,621,512 are invalid under 35 U.S.C. § 103, in light of Sano (RX-0152) *et al.*, Prevue *et al.*, and Alexander *et al.*
- 33) Comcast has not shown, through clear and convincing evidence, that the asserted claims of the U.S. Patent Nos. 8,621,512 are invalid under 35 U.S.C. § 112.

### Domestic Industry

- 34) The domestic industry's technical prong requirement has been satisfied with respect to the infringed patents, U.S. Patent Nos. 8,006,263, 8,578,413, and 8,621,512.
- 35) The domestic industry's technical prong requirement has not been satisfied with respect to U.S. Patent Nos. 6,418,556, 8,046,801, and 8,566,871.
- 36) The domestic industry's economic prong requirement has been satisfied under § 337(a)(3)(A), as there is a significant investment in plant and equipment with respect to the articles protected by the asserted patents.
- 37) The domestic industry's economic prong requirement has been satisfied under § 337(a)(3)(B), as there is a significant employment of labor or capital with respect to the articles protected by the asserted patents.
- 38) The domestic industry's economic prong requirement has been satisfied under § 337(a)(3)(C), as there is a substantial investment in engineering and research and development with respect to the articles protected by the asserted patents.

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- 39) Rovi has not shown that it has satisfied the domestic industry's economic prong through a substantial investment in patent licensing, as Rovi has not satisfied the nexus requirement.

### **Licensing and Additional Defenses**

- 40) Comcast had an express license to "make and have made" and to import and otherwise commercialize products imported before April 1, 2016; products imported before April 1, 2016 are not unlawful imports, and there has been no an unfair act which would constitute a violation Section 337 for these products. No determination has been made on whether a subsequent domestic activity connected to products imported before April 1, 2016 (*e.g.*, any use or sale, completed on or after April 1, 2016, of a set-top box imported before April 1, 2016) infringes the asserted patents.
- 41) Comcast's express license expired on March 31, 2016. *See* JX-0050C at 34.
- 42) Comcast does not have an implied patent license to Rovi's guidance portfolio, including the asserted patents.
- 43) Comcast has not shown the asserted patents are exhausted, as Comcast has not identified a sale for purposes of patent exhaustion or that Comcast has infinite rights to reproduce the Legacy guide.
- 44) Comcast has not shown that exhaustion pertains to the X1 guide.
- 45) ARRIS has not shown that the ARRIS-Rovi IPG License mandates terminating this investigation with respect to the ARRIS respondents.
- 46) ARRIS has not shown that the ARRIS-Rovi IPG License gives ARRIS an implied license that operates as a defense to Rovi's claims.
- 47) ARRIS has not shown that equitable estoppel applies to bar Rovi's claims.
- 48) ARRIS has not shown that waiver applies to bar Rovi's claims.
- 49) ARRIS's arguments about the ARRIS-Rovi IPG License are not barred by issue preclusion, because terminating an investigation under § 337(c) differs from transferring venue pursuant to a forum selection clause.

## **VIII. INITIAL DETERMINATION ON VIOLATION**

Accordingly, it is the initial determination of the undersigned that a violation of section 337 (19 U.S.C. § 1337) has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain digital video

## **PUBLIC VERSION**

receivers and hardware and software components thereof, with respect to U.S. Patent Nos. 8,006,263 and 8,578,413.

It is held that a violation has not occurred with respect to U.S. Patent Nos. 6,418,556, 8,046,801, 8,566,871, and 8,621,512.

Further, this initial determination, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is hereby certified to the Commission.

In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given in camera treatment.

The Secretary shall serve a public version of this initial determination upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order, as amended, 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 § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the initial determination or certain issues herein.

### **IX. ORDER**

To expedite service of the public version, the parties are hereby ordered to file with the Commission Secretary no later than June 5, 2017, a jointly marked copy of this initial determination that includes bold, red brackets to show any portion considered by the parties (or their suppliers of information) to be confidential. The parties shall simultaneously file a joint list indicating each page on which such a bracket is to be found and which party contends the

## **PUBLIC VERSION**

corresponding information is confidential. At least one copy of such a filing shall be served upon the office of the undersigned, and the brackets shall be formatted in bold, red text. If a party (including any supplier of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.

A handwritten signature in black ink, appearing to read 'D. Shaw', is written over a horizontal line.

David P. Shaw  
Administrative Law Judge

Issued: May 26, 2017



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

INV. NO. 337-TA-1001

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **INITIAL DETERMINATION** has been served upon the following parties as indicated, on **JUN 27 2017**.



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

**FOR COMPLAINANTS ROVI CORPORATION AND ROVI GUIDES, INC.:**

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☒ Express Delivery  
☐ Via First Class Mail  
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**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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**CERTAIN DIGITAL VIDEO RECEIVERS AND HARDWARE AND SOFTWARE  
COMPONENTS THEREOF**

**INV. NO. 337-TA-1001**

**RESPONDENTS ARRIS INTERNATIONAL PLC; ARRIS GROUP INC.; ARRIS  
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