

No. 19-\_\_

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**In the  
Supreme Court of the United States**

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COMCAST CORPORATION, ET AL.,

*Petitioners,*

v.

INTERNATIONAL TRADE COMMISSION, ET AL.,

*Respondents.*

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED  
STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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**APPENDIX VOLUME I OF III**

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**APPENDIX A**

IN THE UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT

Nos. 2018-1450, 2018-1653, 2018-1667

COMCAST CORPORATION, COMCAST CABLE  
COMMUNICATIONS, LLC, COMCAST CABLE  
COMMUNICATIONS MANAGEMENT, LLC,  
COMCAST BUSINESS COMMUNICATIONS, LLC,  
COMCAST HOLDINGS CORPORATION, COMCAST  
SHARED SERVICES, LLC, ARRIS ENTERPRISES,  
INC., ARRIS GLOBAL LTD., ARRIS GROUP, INC.,  
ARRIS INTERNATIONAL PLC, ARRIS  
SOLUTIONS, INC., ARRIS TECHNOLOGY, INC.,  
PACE AMERICAS, LLC, TECHNICOLOR, S.A.,  
TECHNICOLOR CONNECTED HOME USA LLC,  
TECHNICOLOR USA, INC.,  
*Appellants*

v.

INTERNATIONAL TRADE COMMISSION,  
*Appellee*

ROVI CORPORATION, ROVI GUIDES, INC.,  
*Intervenors*

Appeals from the United States International  
Trade Commission in Investigation No. 337-TA-1001.

[Filed: March 2, 2020]

Before: NEWMAN, REYNA, and HUGHES,

*Circuit Judges.*

## OPINION

NEWMAN, *Circuit Judge.*

Appellants Comcast Corporation, Comcast Cable Communications, LLC, Comcast Cable Communications Management, LLC, Comcast Business Communications, LLC, Comcast Holdings Corporation, Comcast Shared Services, LLC (collectively “Comcast”); ARRIS Enterprises, Inc., ARRIS Global Ltd., ARRIS Group, Inc., ARRIS International plc, ARRIS Solutions, Inc., ARRIS Technology, Inc., Pace Americas, LLC (collectively “ARRIS”); and Technicolor SA, Technicolor Connected Home USA LLC, and Technicolor USA, Inc. (collectively “Technicolor”) appeal the decision and orders of the United States International Trade Commission (“ITC” or “Commission”). The ITC’s rulings<sup>1</sup> are in accordance with law and supported by substantial evidence, and are affirmed.

## BACKGROUND

Rovi Corporation and Rovi Guides, Inc. (collectively “Rovi”) filed a complaint with the ITC alleging violation of Section 337 of the Tariff Act of 1930. Rovi asserted, *inter alia*, infringement of claims 1, 2, 14, and 17 of United States Patent No. 8,006,263 (“the ’263 patent”) and claims 1, 3, 5, 9, 10, 14, and 18 of United

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<sup>1</sup> *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001, USITC Pub. 4931, 2017 WL 11249982 (Dec. 6, 2017) (“Comm. Op.”); *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001, USITC Pub. 4931, 2017 WL 3485153 (May 26, 2017) (“Final ID”).

States Patent No. 8,578,413 (“the ’413 patent”). Rovi stated, and the Commission found, that Comcast’s customers directly infringe the ’263 and ’413 patents by using Comcast’s X1 system. The Commission found that Comcast is in violation of Section 337 by importing the X1 set-top boxes that are used in the infringing system.

The ’263 and ’413 patents describe and claim an interactive television program guide system for remote access to television programs. The asserted claims require a remote program guide access device, such as a mobile device, that is connected to an interactive television program guide system over a remote access link, whereby users can remotely access the program guide system. Claim 1 of the ’263 patent is representative:

1. A system for selecting television programs over a remote access link comprising an Internet communications path for recording, comprising:
  - 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
  - a remote program guide access device

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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:

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;

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

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;

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.

'263 patent col. 28, ll. 27–63.

The administrative law judge (“ALJ”) conducted an investigation and trial, and found violation of Section 337. The ALJ found that the X1 set-top boxes are imported by ARRIS and Technicolor, and 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.” Final ID at \*11. The full Commission affirmed “the Final ID’s findings and conclusion that Comcast imports the X1 STBs<sup>2</sup> into the United States.” Comm. Op. at \*7.

The full Commission affirmed “the Final ID’s conclusion that the X1 systems meet all of the limitations of the asserted claims” and “Comcast’s customers directly infringed the ’263 and ’413 patents through their use of the X1 systems in the United States.” *Id.* at \*10–11. The Commission stated that “[t]he Final ID’s unreviewed findings also conclude that Comcast induced that infringement,” and that “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.” *Id.* The Commission affirmed that Comcast violated Section 337.

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<sup>2</sup> The Commission refers to the set-top boxes as “STBs” in the Commission Opinions and Determinations.



For ARRIS and Technicolor, the full Commission affirmed the finding of the Final ID that these entities do not directly infringe the asserted claims because they do not provide a “remote access device” as required by the claims. *Id.* at \*13; Final ID at \*162. The Final ID also found that they do not contributorily infringe because the set-top boxes have substantial non-infringing uses. *Id.* at \*163.

The Commission issued a limited exclusion order and cease and desist orders directed to the Comcast respondents. The limited exclusion order excludes importation of the X1 set-top boxes by Comcast, including importation by ARRIS and Technicolor on behalf of Comcast:

Digital video receivers and hardware and software components thereof that infringe one or more of [the asserted claims of the '263 patent and the '413 patent] that are manufactured by, or on behalf of, or are imported by or on behalf of [Comcast,] or any of their affiliated companies, parents, subsidiaries, agents, or other related business entities, or their successors or assigns, including ARRIS and Technicolor to the extent they import such products on behalf of [Comcast], are excluded from entry for consumption into the United States . . . .

*Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001, USITC Pub. 4931 (August 2019) (limited exclusion order) (footnote omitted). The Commission also issued six cease and desist orders to each of the Comcast entities, ordering that each entity:

[C]ease 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 [the asserted claims of the '263 patent and the '413 patent] in violation of section 337 of the Tariff Act of 1930 . . . .

*Id.* (cease and desist orders).

Comcast, ARRIS, and Technicolor appeal, and Rovi participates as intervenor. On appeal Comcast does not dispute direct infringement by its customers, and does not dispute that it induces infringement by its customers. Instead, Comcast argues that its conduct is not actionable under Section 337 because Comcast's inducing conduct "takes place entirely domestically, well after, and unrelated to, the article's importation" and also that Comcast does not itself import the articles. Comcast Br. 1–2. ARRIS and Technicolor argue that the Commission does not have authority to issue an exclusion order "that blocks the importation of articles manufactured and imported by ARRIS and Technicolor despite the Commission's determination that ARRIS and Technicolor did not violate Section 337 and did not infringe the asserted patents." ARRIS Br. 14.

## DISCUSSION

### *Standards of Review*

The Commission's factual findings are reviewed for support by substantial evidence. *Honeywell Int'l, Inc. v. U.S. Int'l Trade Comm'n*, 341 F.3d 1332, 1338 (Fed. Cir. 2003). Legal conclusions receive *de novo* review. *Id.*

To remedy violation of Section 337, "the Commission has broad discretion in selecting the form, scope, and extent of the remedy, and judicial review of its choice of remedy necessarily is limited." *Hyundai Elecs. Indus. Co. v. U.S. Int'l Trade Comm'n*, 899 F.2d 1204, 1209 (Fed. Cir. 1990). The court "may set aside the Commission's choice of remedy only if it is legally erroneous, arbitrary and capricious, or constitutes an abuse of discretion." *Fuji Photo Film Co. v. U.S. Int'l Trade Comm'n*, 386 F.3d 1095, 1106 (Fed. Cir. 2004).

## I

### MOTION TO DISMISS

The '263 patent expired on September 18, 2019 and the '413 patent expired on July 16, 2019. The Appellants have moved for dismissal of this appeal on the ground that the appeal has become moot, for after a patent expires "the ITC's limited exclusionary order and cease and desist orders as to that patent have no further prospective effect." *Hyosung TNS Inc. v. U.S. Int'l Trade Comm'n*, 926 F.3d 1353, 1357 (Fed. Cir. 2019). The Appellants also request vacatur of the Commission's determination of violation of Section 337.

The Commission and Rovi oppose, stating that there are continuing issues and actions to which these rulings are relevant, whereby appellate finality is warranted because there are ongoing "collateral consequences," referring to two ITC investigations on

unexpired Rovi patents that involve imported X1 set-top boxes. The Commission identifies *Certain Digital Video Receivers and Related Hardware and Software Components*, Inv. No. 337-TA-1103 (“1103 Investigation”) and *Certain Digital Video Receivers, Broadband Gateways, and Related Hardware and Software Components*, Inv. No. 337-TA-1158 (“1158 Investigation”).

It appears to be undisputed that these investigations are likely to be affected by the decisions here on appeal. For example, in the 1103 Investigation the ALJ stated that “[t]he Federal Circuit’s ruling” in the present appeal “will affect the finding” in that investigation. 1103 Investigation, 2019 WL 2953268, at \*2 (June 3, 2019). And in the 1158 Investigation there is a similar issue of importation, with the date for completion of the investigation set for October 29, 2020, pursuant to Commission Rule 210.51(a)(1). 1158 Investigation, 2019 WL 2880853, at \*2 (July 3, 2019).

It is recognized that “a case may remain alive based on collateral consequences, which may be found in the prospect that a judgment will affect future litigation or administrative action.” *Hyosung*, 926 F.3d at 1358 (citing 13C Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, Federal Practice and Procedure § 3533.3.1 (3d ed. 2008) (internal quotation marks omitted)). Although in *Hyosung* the court held that co-pending district court litigation did not avert mootness of an ITC decision after patent expiration, the pending actions here involve unexpired patents related to the same imported X1 set-top boxes. The Commission states that the issues on appeal concern the scope of Section 337 as a matter of statutory interpretation.

We conclude that there are sufficient collateral

consequences to negate mootness. The motion for dismissal is denied.

## II

### THE SECTION 337 VIOLATION

The Final ID and the full Commission found violation of Section 337. 19 U.S.C. § 1337(a) includes:

(1) Subject to paragraph (2), the following are unlawful . . . .

(B) The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that—

(i) infringe a valid and enforceable United States patent . . . .

It is not disputed that Comcast's customers directly infringe the '263 and '413 patents. It is also undisputed that Comcast induces its customers to directly infringe these patents. Comcast's argument is that Section 337 is not violated for two reasons: first, that the imported X1 set-top boxes are not "articles that infringe" because the boxes do not infringe the patents at the time of importation; and second, that Comcast is not the importer of the X1 set-top boxes, but takes title to the imported boxes only after the boxes are imported by ARRIS and Technicolor.

***“Articles that Infringe”***

Comcast argues that the Commission’s authority under Section 337 is limited to excluding articles that infringe at the time of importation. Comcast states that this is the holding of *Suprema, Inc. v. U.S. Int’l Trade Comm’n*, 796 F.3d 1338 (Fed. Cir. 2015) (en banc). The Commission and Rovi respond that *Suprema* establishes that imported articles infringe in terms of Section 337, when infringement occurs after importation.

In *Suprema* this court considered Section 337 as applied to infringement after importation, stating:

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

*Id.* at 1349 (alteration and emphasis in original) (citations omitted). The court held that “the Commission’s interpretation that the phrase ‘articles that infringe’ covers goods that were used by an

importer to directly infringe post-importation as a result of the seller's inducement is reasonable.” *Id.* at 1352–53.

Comcast argues that *Suprema* should be limited to its facts, whereby the inducement liability must be attached to the imported article at the time of the article's importation. Comcast states that the imported X1 set-top boxes are incapable of infringement until the X1 set-top boxes are combined with Comcast's domestic servers and its customers' mobile devices. Comcast contends that any inducing conduct of articles that infringe occurs entirely after the boxes' importation.

The Commission correctly held that Section 337 applies to articles that infringe after importation. *See Suprema, supra*. The Commission found:

Moreover, even if the location of Comcast's inducing conduct were legally relevant, and it is not, Comcast designed the X1 STBs to be used in an infringing manner, and directed their manufacture overseas—requiring, among other things, overseas installation of the relevant software onto the STBs. 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). Comcast then directed the importation of those STBs to Comcast facilities in the United States. Final ID at 9–12. Comcast’s inducing activity took place overseas, prior to importation; it took place at importation; and it took place in the United States, after importation. *See, e.g., id.* at 9–12, 232–37, 399.

J.A. 85 n.13. It is undisputed that direct infringement of the ’263 and ’413 patents occurs when the imported X1 set-top boxes are fitted by or on behalf of Comcast and used with Comcast’s customers’ mobile devices. Reversible error has not been shown in the Commission’s determinations that the X1 set-top boxes imported by and for Comcast for use by Comcast’s customers are “articles that infringe” in terms of Section 337.

## B

### ***“Importer” under Section 337***

Section 337 prohibits the “importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that” infringe a valid patent. 19 U.S.C. § 1337(a)(1)(B)(i). Whether a party is an importer in terms of Section 337 is a question of fact, and the Commission’s finding is reviewed for support by substantial evidence. *In re Orion Co.*, 71 F.2d 458, 462 (C.C.P.A. 1934) (“This is substantial evidence that, at the time of the acts complained of by the complainant, the Orion Company was an importer or consignee of slide fasteners.”).



Comcast argues that it is not an importer of the X1 set-top boxes, in that the importer of record is ARRIS or Technicolor. Comcast states that it does not physically bring the boxes into the United States and it does not exercise any control over the process of importation. The Commission and Rovi respond that Comcast is an importer in terms of Section 337 because Comcast causes the X1 set-top boxes to enter the United States.

The Final ID found that the X1 set-top boxes “are so tailored to Comcast’s system and requirements that they would not function within another cable operator’s system.” Final ID at \*11. “Further, the software at issue in the heart of this investigation is attributable squarely to Comcast.” *Id.* The Final ID concluded that “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.” *Id.*

The Final ID sets forth extensive evidence of Comcast’s control over the importation of the X1 set-top boxes, including that Comcast requires that the X1 set-top boxes “adhere to its specifications and acceptability standards.” *Id.* at \*10. Comcast also “[p]rovides ARRIS and Technicolor with detailed technical documents” so the X1 set-top boxes “operate as required by Comcast within its network to provide services to Comcast subscribers.” *Id.* The “products are designed only for Comcast” and Comcast restricts ARRIS’s “ability to sell the products without Comcast’s permission.” J.A. 135.

The Final ID found that Comcast “[k]nows the imported products are manufactured abroad and imported into the United States” and requires ARRIS

and Technicolor “to deliver the accused products to Comcast delivery sites in the United States.” Final ID at \*10–11. The Final ID found that “Comcast alone controls the volume of accused products that enter the United States, through forecasts and orders sent to ARRIS and Technicolor.” J.A. 136.

The Final ID also found that Comcast “[r]equires ARRIS and Technicolor to handle importation formalities, such as fees, documentation, licenses, and regulatory approvals.” *Id.* The Final ID concluded that “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).” Final ID at \*405.

The full Commission concluded that Comcast is an importer of the X1 set-top boxes. The Commission stated that “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.” Comm. Op. at \*12.

The Commission’s findings of importation by or for Comcast of articles for infringing use are supported by substantial evidence. The Commission’s determination of violation of Section 337 is in conformity to the statute and precedent.

## III

## THE LIMITED EXCLUSION ORDER

ARRIS and Technicolor argue that Section 337 limits exclusion orders to articles “imported by any person violating the provision of this section.” 19 U.S.C. § 1337(d)(1). ARRIS and Technicolor argue that the limited exclusion order is improperly applied to them because they were found not to be infringers or contributory infringers. The Final ID found that the X1 set-top boxes are non-infringing when imported, and that contributory infringement does not lie because the boxes as imported have non-infringing uses such as watching live television.

The Commission responds that the exclusion order as applied to ARRIS and Technicolor is within ITC discretion to enforce Section 337, because the order is limited to importations on behalf of Comcast, of articles whose intended use is to infringe the patents at issue.

The Commission has discretion in selecting a remedy that has a reasonable relation to the unlawful trade practice. *See Cisco Systems, Inc. v. U.S. Int’l Trade Comm’n*, 873 F.3d 1354, 1363 (Fed. Cir. 2017) (“Blocking imports of articles that induce patent infringement has a reasonable relationship to stopping unlawful trade acts.”). The Commission points out that ARRIS and Technicolor were respondents in the investigation, and the exclusion order is limited to articles imported on behalf of Comcast. On these facts, the limited exclusion order is within the Commission’s discretion as reasonably related to stopping the unlawful infringement, and is affirmed.

## CONCLUSION

The rulings and remedial actions of the Commission

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are in accordance with law, and the underlying findings are supported by substantial evidence. The Commission's decision and implementing orders are affirmed.

**AFFIRMED**

**APPENDIX B**

**UNITED STATES INTERNATIONAL TRADE  
COMMISSION**

Investigation No. 337-TA-1001

**In the Matter of CERTAIN DIGITAL VIDEO  
RECEIVERS AND HARDWARE AND SOFTWARE  
COMPONENTS THEREOF**

**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 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.

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”) (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

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



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).

| <b>Patent</b> | <b>Infringement</b>    |                        | <b>Domestic Industry (Technical Prong)</b> |
|---------------|------------------------|------------------------|--|
|               | <i>X1 STBs</i>         | <i>Legacy STBs</i>     |  |
|               |                        |                        |  |
| <b>'556</b>   | 7, 18, 40              | 7, 18, 40              | 7, 18, 40                                  |
| <b>'263</b>   | 1, 2, 14, 17           | 1, 2, 14, 17           | 1, 2, 14, 17                               |
| <b>'801</b>   | 1, 5, 10, 15           | 1, 5, 10, 15           | 1, 5, 10, 15                               |
| <b>'871</b>   | 12, 17, 18             | (none)                 | 12, 13, 17, 18                             |
| <b>'413</b>   | 1, 3, 5, 9, 10, 14, 18 | 1, 3, 5, 9, 10, 14, 18 | 1, 3, 5, 9, 10, 14, 18                     |
| <b>'512</b>   | 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-

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<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).

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.

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>

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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

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 X1 of Respondents' Petition for Review).
- (5) . . . [W]hether Comcast's two alternative designs infringe the '263 and '413 patents (Issue 4 in Respondents'

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petitions and/or replies are denoted herein with "(Summary)."

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). . . [W]hether the ARRIS-Rovi Agreement provides a defense to the allegations against the ARRIS respondents (the issue discussed in section X1 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. 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

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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.

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 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

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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.

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

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

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<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.

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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.



*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 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,

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). [ ].

### 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 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 sublicensee 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 [ ]. 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 (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 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.

## **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. 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

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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.

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 (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

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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.



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.

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

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); [ ].

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>

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<sup>13</sup> Moreover, even if the location of Comcast's inducing conduct

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 (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

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were legally relevant, and it is not, Comcast designed the X1 STBs to be used in an infringing manner, and directed their manufacture overseas—requiring, among other things, overseas installation of the relevant software onto the STBs. 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). Comcast then directed the importation of those STBs to Comcast facilities in the United States. Final ID at 9-12. Comcast’s inducing activity took place overseas, prior to importation; it took place at importation; and it took place in the United States, after importation. See, e.g., *id.* at 9-12, 232-37, 399.

(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

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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.

(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) (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 [      ].

[      ].

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 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.

[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.*

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

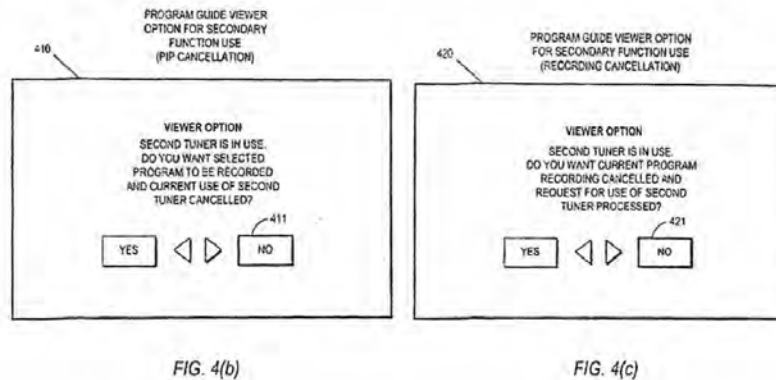
Before the ALJ, the parties disputed the phrase “cancel the function of the second tuner to permit the second tuner to perform the requested tuning operation.” *See* Final ID at 421-29. The Final ID describes the parties’ proposed constructions as follows.

| <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. |

*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.

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<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.



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.

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 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).

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

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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).

51a

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;

[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.

#### **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.

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. 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' 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 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 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 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, 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).

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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.

## 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].

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 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

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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.

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 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*

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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.

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-actixated-tv.html> (last visited Nov. 16, 2017); Sony Lets Google Home Be Your Remote Control, CNET, Andrew 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 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

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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.

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, 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 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 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 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

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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.

*/s/ Lisa R. Barton*

Lisa R. Barton

Secretary to the Commission

Issued: December 6, 2017

**[CERTIFICATE OF SERVICE OMITTED]**

**APPENDIX C**

**UNITED STATES INTERNATIONAL TRADE  
COMMISSION**

Investigation No. 337-TA-1001

**In the Matter of CERTAIN DIGITAL VIDEO  
RECEIVERS AND HARDWARE AND SOFTWARE  
COMPONENTS THEREOF**

**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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## 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 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;

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



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;
- 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 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 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 IGPs 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 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 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., ¶¶ 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>

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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.

### **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 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.

### **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>
- Has specified that the products are designed only for Comcast (ARRIS does not even market the products);<sup>4</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.

- Restricts ARRIS's ability to sell the products without Comcast's permission;<sup>5</sup> and
- Provides ARRIS and Technicolor with detailed technical documents that "regarding the hardware design for the XG1 and XG2 platform STB product family, 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>
- Requires ARRIS to notify Comcast in the event that there are any "changes to a Product's location of contract manufacturing[;]"<sup>8</sup>
- Requires ARRIS to deliver the accused products to Comcast delivery sites in the United States;<sup>9</sup>

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<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.

<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.

- Requires Technicolor to deliver the accused products to Comcast delivery sites in the United States and Canada;<sup>10</sup>
- Relies on ARRIS and Technicolor to ensure sufficient quantities of the accused products are available;<sup>11</sup>
- Requires ARRIS and Technicolor to handle importation formalities, such as fees, documentation, licenses, and regulatory approvals;<sup>12</sup> and
- Comcast alone controls the volume of accused products that enter the United States, through forecasts and orders sent to ARRIS and Technicolor.<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>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 crystallizes its argument that Comcast requires: [ ] Rovi Reply at 13.

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:

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

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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-

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 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.

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0688C (Comcast Terms and Conditions) at .0007; RX-0689C (Comcast Terms and Conditions) at .0008.

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 (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. 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

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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).

of the widely accepted meaning of 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.

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. *Elektta 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.” *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.” *Sponsion, 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 Sponsion*, 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, 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,

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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).

<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).



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)).

## **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.*,

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<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.

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 especially adapted for use in an infringement of such patent, and not a staple article 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.

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*

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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.

*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.”

*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 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))).

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) (“*TLI*”) (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 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

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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).

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 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

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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)).

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 reasonably 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:

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

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

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 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>

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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

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*”).

### **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,

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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.”).

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 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:

| <b>Claim Term</b>   | <b>Agreed Construction</b>   |
|---|--|
| 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  |
| 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 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:

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

| <b>Rovi's Preamble Proposal</b>  | <b>Comcast's Preamble Proposal</b>   |
|--|--|
| <p><b><u>Claims 3 and 15:</u></b></p> <p>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 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:

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

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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.

“electronic program guide” standing alone. Respondents argue that the preamble must be limiting because the terms “serve as antecedent bases” for phrases used 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 (2nd ¶ of “electronic programming guide”); *id.* at 265-66 (2nd ¶ 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 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 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.

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 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. | <p>Rovi contends that the “memory means” is subject to 35 U.S.C. § 112, para. 6.</p> <p><b>Function:</b> “storing program schedule information”</p> <p><b>Structure:</b> “(DRAM) and then-existing equivalents”</p> |

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 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 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

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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

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 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

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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.

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 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:

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 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).

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:

| <b>Claim Language</b>   | <b>Function</b>  |
|---|--|
| <b>Claim 3:</b><br>“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[.]”<br>JX-0001 at 24:26-34. | 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[.] |

| <b>Claim Language</b>   | <b>Function</b>  |
|---|--|
| <b>Claim 15:</b><br>“a program schedule display generator coupled to said data processing means and | displaying, in a partial overlay on said display signal, user-selected portions of said schedule |

|  |  |
|--|--|
| 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[.]”<br>JX-0001 at 28:16-28. | 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><br>“a program schedule display generator coupled to said data | displaying,<br>simultaneously with said display signal, user-selected portions of said |

|   |  |
|---|--|
| 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 | 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[.] |
|---|--|



|   |  |
|---|--|
| information is displayed.” JX-0001 at 36:45-60. |  |
|---|--|

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.”).

*(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 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 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:

- 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 remainder of the parties’

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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).

<sup>31</sup> Comcast argues: “The only disclosed structure capable of performing the recited functions is ‘Microcontroller 16,’ a general-

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:

| <b>Rovi’s Proposed Construction</b>   | <b>Comcast’s Proposed Construction</b>   |
|---|--|
| <p>No construction is necessary.</p> <p>Alternatively, one configuration of said programming guide.</p> | <p>“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 <b><i>a simultaneous display or overlay of program schedule information</i></b></p> |

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purpose processor, such as a M68000EC and any then-existing known equivalent structures.” Resps. Br. at 297 (bold and italics added).

|  |  |
|--|--|
|  | <b><i>with another video signal with the recited navigation and tuning functions.”</i></b> |
|--|--|

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 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

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<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

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:

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 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 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 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 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:

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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.

| <b>Rovi's Proposed Construction</b>  | <b>Comcast's Proposed Construction</b>  |
|--|---|
| <p>No construction is necessary.</p> <p>Alternatively, such that reminder messages may be presented in one or more configurations.</p> | <p>Comcast does not clearly present a construction in its post-hearing brief.</p> <p>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)."</p> |

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

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<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.

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

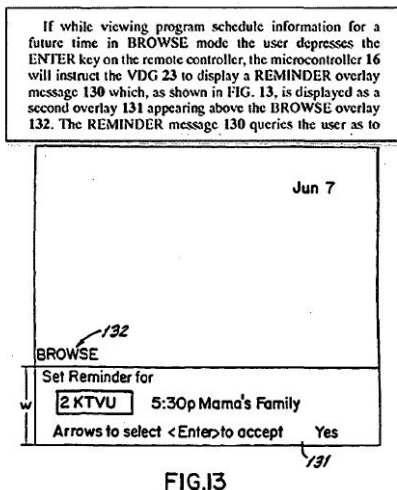
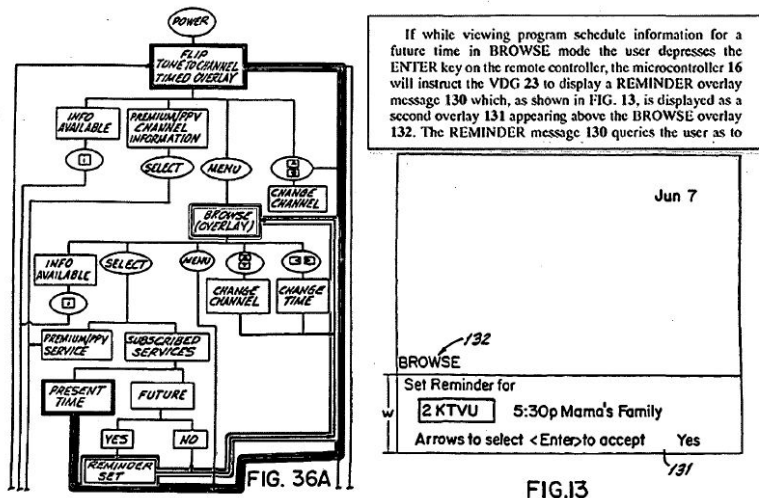
Comcast nevertheless argues that a broader phrase in claim 15—“selectively display reminder selection message in at least one mode of operation”—is limited to displaying a “reminder selection message” in a “browse” mode of operation in which only a single program in a single time slot is displayed. This 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 “overlying 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:



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.

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 comer 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 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”

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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.”.

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). [ ] *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. *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). 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 X1(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;

[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          |

| <b><u>Missing Limitations</u></b>                     | <b><u>Types of Deficiency</u></b>   | <b><u>STBs</u></b> |
|---|---|--------------------|
| EPG located at the user site                          | Not literally present<br><br>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          |
| No partial overlay                                    | Not present in full-screen guide or default configuration of Mini Guide                     | X1                 |
| No Browse Mode as                                     | Not literally present   | X1/Legacy          |

| <b><u>Missing Limitations</u></b>  | <b><u>Types of Deficiency</u></b>                                 | <b><u>STBs</u></b> |
|--|---|--------------------|
| properly construed   |   |                    |
|  | 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 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 [ ] 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 Set. Corp.*, 558 F. App’x 998, 1000 (Fed. Cir. 2014) (“conclusory 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.

*(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>

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

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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.”).

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 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 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.*

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 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 & 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 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

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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.”).



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) 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.

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

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<sup>38</sup> Comcast’s “Browse Mode” arguments are addressed in relation to limitation 3f.

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. 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

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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.”).

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 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.

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-

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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.

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.

(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.

*(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-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.

*(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 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.*

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

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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.”)).

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 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.

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; *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:

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).

*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:

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:

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 unrebutted 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.

***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 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 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 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 (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”

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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.”).

because “[m]any or most accused infringers have such plausible defenses[.]”).

***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

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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.

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 [ ]

**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 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.

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.”).

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.

A. I don't recall if I put that in my witness — if that's in my witness 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:

- 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’.”).

*(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 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 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 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 [ ] 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 timing, 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.

*(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:

**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 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 timed 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.

*(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.

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<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.”).

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 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 overlaid 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 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:

[ ]

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 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. GX-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-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

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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.”)).

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.

***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
- 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:

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<sup>46</sup> Florin was disclosed to the Examiner. *See* JX-0001 at 3.

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 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 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.*, 126 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 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 overlaid 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 time 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>*

<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.

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).

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 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.

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. .

. .

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 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 “overlayed” 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>

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

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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, 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.

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 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.

"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.

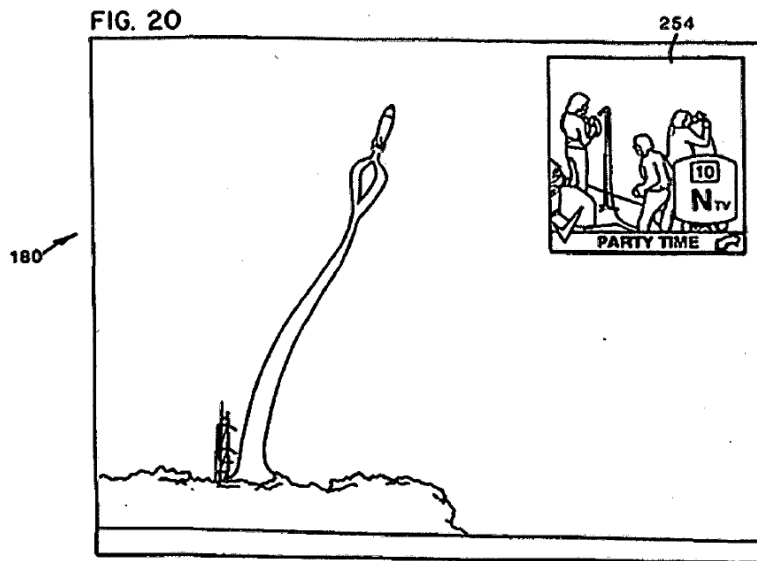
For claim 15, Dr. Delp, Rovi's expert, opined that:

**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.

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:

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<sup>50</sup> Florin was disclosed to the Examiner. *See* JX-0001 at 3.

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 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

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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).



listings,” and that Young ’268 “does not disclose interactive functionality” (limitation 3d).<sup>52</sup>

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

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<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.

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 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

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<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

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:

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individual program listings . . . while continuing to watch a currently tuned program.”



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

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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,

explain why a person of ordinary skill in the art would have combined 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.

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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.

<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).

(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 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-

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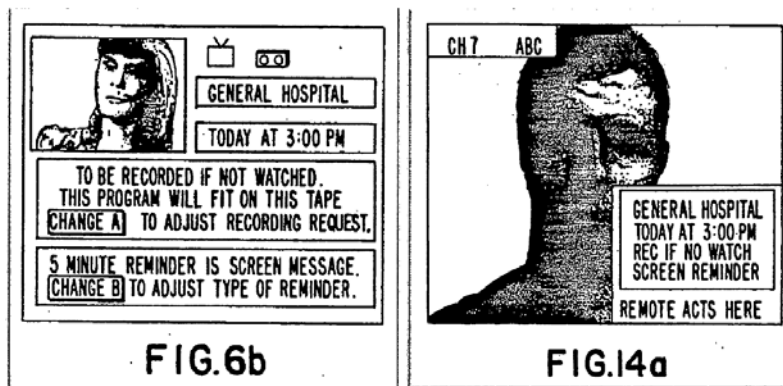
<sup>56</sup> Young '121 and Strubbe were disclosed to the Examiner. See JX-0001 at 3. The Examiner also considered Strubbe and Young. *Id.*; see also JX-0008C at 797 (Young '121 was used as a primary reference), 852 (Strubbe was used as a secondary reference).



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 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, 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:

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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).

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 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*.

(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

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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.

<sup>61</sup> *Moro* (EP0444496) was not before the Examiner. *See generally* JX-0001.

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

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<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.

commands” of claim 3); *see also* RX-0216 at Fig. 2 (time information is not explicitly shown).

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

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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.

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 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;
- ***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
- ***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.” *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>

*(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

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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 (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).



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

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

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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.

inventions, or for other economic reasons related to the whole '956 patent family.”).

[ ] 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

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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.

may be 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).

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

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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.

(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).

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 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).

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.

*(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.

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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 . . . .”

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***

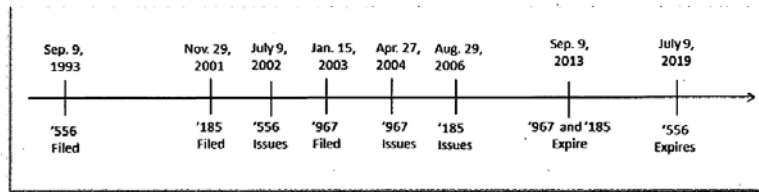
Comcast argues:

... 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).

Rovi argues that the '556 Patent, which was filed before the 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.

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.”

*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

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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.

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 determines whether those differences render the claims patentably distinct").<sup>72</sup> Comcast has not

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<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).

<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

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

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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.").



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. *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 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:

| <b>Claim Term</b>   | <b>Agreed Construction</b>                 |
|---|--|
| 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.                  |

| <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   |

| <b>Claim Term</b>               | <b>Agreed Construction</b>                                |
|---------------------------------|---|
| 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:

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

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<sup>73</sup> EDIS Doc. ID No. 600641, filed Jan. 10, 2017.

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>

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<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.

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 television program listings and causes display of program information on user television equipment | interactive television program guide 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

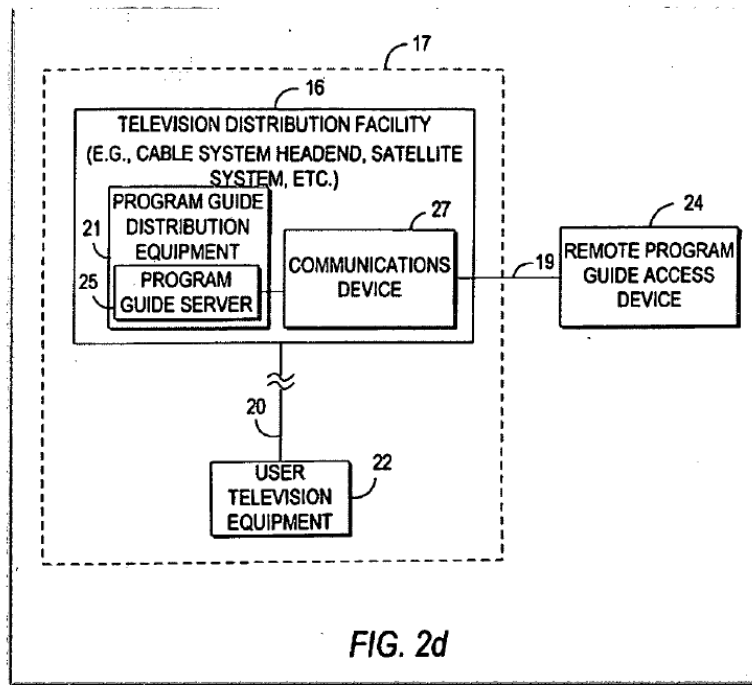
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<sup>75</sup> Comcast's post-hearing brief explains that “Comcast proposes that ‘local interactive television program guide’ be construed as ‘interactive television program guide inside a user's home’ and ‘remote access interactive television program guide’ be construed as ‘interactive television program guide outside a user's home.’” Resps. Br. at 71.



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:



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*

<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).

***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 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.

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.

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

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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.”

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 (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 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 additional 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.

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.

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’

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<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.

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

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<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.

“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 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 additional 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 “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