PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of **CERTAIN DIGITAL VIDEO RECEIVERS AND HARDWARE AND SOFTWARE COMPONENTS THEREOF**	**Investigation No. 337-TA-1001**

COMMISSION OPINION

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

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

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

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.[1] On December 2, 2016, the Commission determined not to review an ID terminating the investigation as to claim 15 of the '263 patent; claim 28 of the '801 patent; claims 2, 3, 14, and 15 of the '512 patent; claim 16 of the '147 patent; claims 3, 12, and 14 of the '556 patent; and claims 23, 28, and 29 of the '871 patent.[2] 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.[3]

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

---

[1] Order No. 17 (Sept. 23, 2016), *unreviewed*, Comm'n Notice (Oct. 21, 2016).

[2] Order No. 25 (Nov. 14, 2016), *unreviewed*, Comm'n Notice (Dec. 2, 2016).

[3] Order No. 27 (Dec. 5, 2016), *unreviewed*, Comm'n Notice (Dec. 28, 2016).

Patent	Infringement		Domestic Industry (Technical Prong)
	X1 STBs	*Legacy STBs*	
'556	7, 18, 40	7, 18, 40	7, 18, 40
'263	1, 2, 14, 17	1, 2, 14, 17	1, 2, 14, 17
'801	1, 5, 10, 15	1, 5, 10, 15	1, 5, 10, 15
'871	12, 17, 18	(none)	12, 13, 17, 18
'413	1, 3, 5, 9, 10, 14, 18	1, 3, 5, 9, 10, 14, 18	1, 3, 5, 9, 10, 14, 18
'512	1, 10, 13, 22	1, 10, 13, 22	1, 10, 13, 22

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

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

On June 9, 2017, the ALJ issued his Recommendation on Remedy and Bond (the "RD"). The RD declares that,

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

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.[4] On August 10, 2017, the Commission determined to review some of the petitioned issues. Notice of Review, 82 FR at 38934-36. Specifically, the Commission determined to review the following issues:

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

---

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

> (7) The Final ID's conclusion that the asserted claims of the '512 patent are invalid as obvious (the issue discussed in section VI.B.4 of Rovi's Petition for Review).
>
> (8) . . . [W]hether the ARRIS-Rovi Agreement provides a defense to the allegations against the ARRIS respondents (the issue discussed in section XI of Respondents' Petition for Review).
>
> (9) The Final ID's conclusion that Rovi did not establish the economic prong of the domestic industry requirement based on patent licensing (the issue discussed in section IV of Rovi's Petition for Review).

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

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

Id. On August 24, 2017, Rovi and Respondents filed their written submissions on the issues under review and on remedy, public interest, and bonding, and on August 31, 2017, the parties filed their reply submissions.[5]

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.

---

[5] 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.

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

B. Patents Related to the Issues under Review

1. The '263 and '413 Patents—the "Remote Access Patents"

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

---

[6] "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.

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

2. The '512 Patent

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

C. Products at Issue

1. The Accused Products

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

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

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

---

[7] An IPG allows, for example, a person viewing a television to select channels for viewing or recording.

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

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

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

Id. at 10-11.

2. The Domestic Industry Products

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

II. ISSUES UNDER REVIEW

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

1. The X1 STBs

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

---

[8] April 1, 2016, is the day after patent and software licenses between Rovi (licensor) and Comcast (licensee) expired.

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 sub-licensee were authorized by the patentee's license agreement with the licensee for purposes of patent exhaustion), *aff'd per curiam*, 640 Fed. Appx. 917 (Fed. Cir. 2016) (unpublished).

Rovi granted Comcast an express license to

[

].

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,[9] 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).[10]

---

[9] 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.

[10] 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

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.*

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.

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.[11] The Final ID also finds that Comcast induces its customers to infringe those patents. *E.g.*, *id.* at 610-11. The Final ID further finds that ARRIS and Technicolor do not directly or indirectly infringe those patents. *E.g.*, *id.* at 237, 610-11.

3. Commission Determination and Analysis

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

[11] 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.

(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.[12] The Commission finds no section 337 violation by ARRIS or Technicolor because Rovi failed to demonstrate direct or indirect infringement by ARRIS and Technicolor.

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

> [1pre] 1. A system for selecting television programs over a remote access link comprising an Internet communications path for recording, comprising:
>
> [1a] a local interactive television program guide equipment on which a local interactive television program guide is implemented, wherein the local interactive television program guide equipment includes user television equipment located within a user's home and the local interactive television program guide generates a display of one or more program listings for display on a display device at the user's home; and
>
> [1b] a remote program guide access device located outside of the user's home on which a remote access interactive television program guide is implemented, wherein the remote program guide access device is a mobile device, and wherein the remote access interactive television program guide:
>
> [1c] generates a display of a plurality of program listings for display on the remote program guide access device, wherein the display of the plurality of program listings is generated based on a user profile stored at a location remote from the remote program guide access device;

---

[12] 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.

> [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 Xl 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.[13] 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

---

[13] Moreover, even if the location of Comcast's inducing conduct were legally relevant, and it is not, [

]. Final ID at 9-12, 232, 234; *Wing Shing Pdts. (BVI), Ltd. v. Simatelex Manufactory Co.*, 479 F.Supp.2d 388, 409-11 (S.D.N.Y. 2007) ("[N]umerous courts have held that, in contrast to §§ 271 (a) and (c), § 271 (b) applies to extraterritorial conduct."); *see also, e.g., Honeywell, Inc. v. Metz Apparatewerke*, 509 F.2d 1137, 1141-42 (7th Cir. 1975); *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, 2006 WL 463525, at *7 (N.D. Cal. 2006). [

].

(Fed. Cir. 2012) (explaining that "substantial non-infringing use" is relevant only to contributory infringement); *cf. Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 942 (2005).[14]

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[15]

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

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

---

[14] 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.").

[15] 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.

(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.

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

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

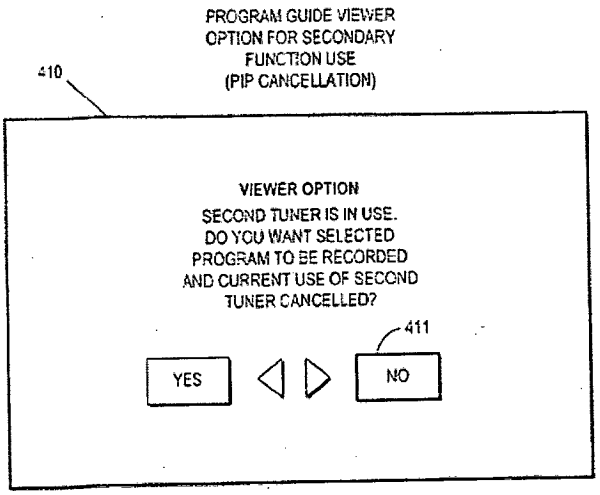


FIG. 4(b)

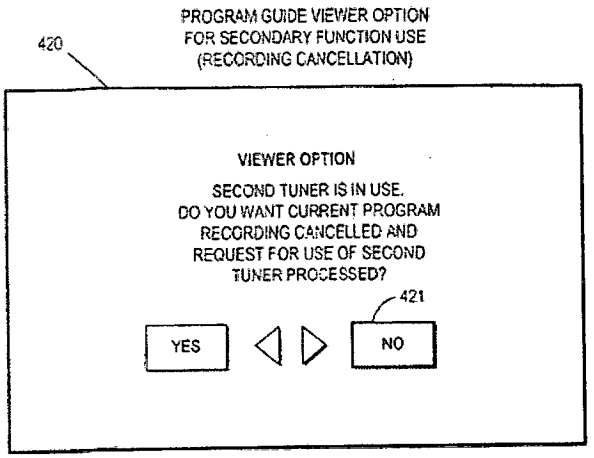


FIG. 4(c)

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

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

---

[16] 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.

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[17] and Sano.[18] *See* Final ID 530-39. Annotated claim 13 is reproduced below as representative of the asserted claims of the '512 patent.

> [13a] 13. A system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising:
>
> [13b] a first tuner;
>
> [13c] a second tuner; and
>
> [13d] an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to:
>
> [13e] receive a request to perform a tuning operation;

---

[17] U.S. Patent No. 6,240,240 (May 29, 2001) (RX-0153).

[18] U.S. Patent No. 6,445,872 (Sept. 3, 2002) (RX-0152).

> [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.[19] *See, Certain Automated Teller Machines, ATM Modules, Components Thereof, & Pdts. Containing Same*, Inv. No. 337-TA-989, Comm'n Op. at 24 (Aug. 3, 2017).

2. The RD

As to the Comcast respondents, the RD declares,

> [I]n order to supply its customers with [STBs], Comcast ships and stores millions of imported, accused [STBs] through an extensive warehousing and distribution network that reaches throughout the United States.
>
> . . . [I]t would [undercut an] LEO to permit Comcast to send the adjudicated, infringing products through its warehousing and distribution network for ultimate delivery to end-users. Consequently, it is recommended, if a violation is found, . . . that the Comcast respondents . . . should be subject to a [CDO].

---

[19] The Commissioners have adopted different approaches to analyzing when it is appropriate to issue CDOs. In particular, Chairman Schmidtlein 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 Schmidtlein 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.

> 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.[20]

1. Public Health and Welfare

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

[20] 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.

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.[21] 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[22] Submission at ¶¶ 49-67, n.41.

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

---

[21] 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.*

[22] Daniel F. Spulber, Ph.D., is an economics professor and a Rovi witness.

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

Respondents argue that the accused products

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

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

---

[23] 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.

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

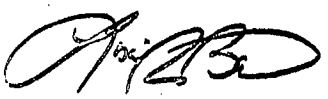
during any Presidential review period. *See Network Devices (I)*, Inv. No. 337-TA-944, Comm'n Op. at 57.

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 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.



Lisa R. Barton
Secretary to the Commission

Issued: December 6, 2017

CERTAIN DIGITAL VIDEO RECEIVERS AND HARDWARE AND SOFTWARE COMPONENTS THEREOF

Inv. No. 337-TA-1001

PUBLIC CERTIFICATE OF SERVICE

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

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

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

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

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____

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

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

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____

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

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

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____

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

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

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____