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Subject to Protective Order

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of	
CERTAIN DIGITAL VIDEO RECEIVERS AND RELATED HARDWARE AND SOFTWARE COMPONENTS	**Inv. No. 337-TA-1103**

ORDER NO. 41: **CONSTRUING CERTAIN TERMS OF THE ASSERTED CLAIMS OF THE PATENTS AT ISSUE (*MARKMAN* CLAIM CONSTRUCTION)**

(October 15, 2018)

I. BACKGROUND

On March 16, 2018, the Commission instituted this Investigation pursuant to subsection (b) of Section 337 of the Tariff Act of 1930, as amended, to determine:

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

83 Fed. Reg. 11792 (Mar. 16, 2018).[1]

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

On March 28, 2018, a Proposed Scheduling Order issued to guide the timing and conduct

[1] The asserted patents are: U.S. Patent No. 7,779,011 (''the '011 patent''); U.S. Patent No. 7,937,394 (''the '394 patent''); U.S. Patent No. 7,827,585 (''the '585 patent''); U.S. Patent No. 9,294,799 (''the '799 patent''); U.S. Patent No. 9,396,741 (''the '741 patent''); U.S. Patent No. 9,578,363 (''the '363 patent''); U.S. Patent No. 9,621,956 (''the '956 patent''); and U.S. Patent No. 9,668,014 (''the '014 patent''). 83 Fed. Reg. 11792 (Mar. 16, 2018).

of this Investigation. (Order No. 2 (Mar. 28, 2018).). Also on March 28, 2018, an initial determination ("ID") issued setting August 16, 2019 as the target date in this Investigation. (Order No. 3 (Mar. 28, 2018).). On April 16, 2018, an initial procedural schedule ("Procedural Schedule)" issued (Order No. 4 (Apr. 16, 2018)) that accepted "most proposed scheduling changes set forth in the Parties' Corrected Proposed Schedule," filed on April 10, 2018 (Doc. ID No. 641506 (Apr. 10, 2018)).

On June 11, 2018, the Private Parties filed a joint claim construction chart ("Joint CC Chart"). (Doc. ID No. 647338 (June 11, 2018).).[2] The Joint CC Chart lays out the claim terms for which a meaning remains in dispute. (*Id.*).

On June 15, 2018, the Private Parties each filed a claim construction brief. (Complainants' Initial Claim Construction Brief ("CMBr.") (Doc. ID No. 647981 (June 15, 2018); Respondents' Initial Claim Construction Brief, Doc. ID No. 647995 (June 15, 2018).). Also on June 15, 2018, the Private Parties filed a joint *Markman* Hearing Proposal requesting the scheduling of a one-day *Markman* hearing to occur on July 11, 2018 or July 12, 2018. (Doc. ID No. 647986 (June 15, 2018).). On June 27, 2018, Respondents filed a corrected Initial Claim Construction Brief. (Respondents' Corrected Claim Construction Brief ("RMBr.") (Doc. ID No. 648940) (June 18, 2018).).

On June 20, 2018, an order issued setting July 26, 2018 as the date of the *Markman* hearing. (Order No. 10 (June 20, 2018).). The *Markman* hearing took place on July 26, 2018. (*Markman* Hearing Transcript ("*Markman* Tr."), Doc. ID No. 651341 (July 27, 2018).).

On August 10, 2018, the Private Parties filed a joint chart setting forth their post-*Markman* hearing claim constructions ("Joint Post-*Markman* CC Chart"). (Doc. ID No. 652733

[2] This is the official received date. The Private Parties filed the Joint CC Chart on June 8, 2018.

(Aug. 10, 2018).). The agreed upon and disputed claim terms construed in Appendix A are based on this Joint Post-*Markman* CC Chart.

On October 5, 2018, a teleconference was held to provide the Private Parties constructions of disputed claim terms in advance of the evidentiary hearing ("Hearing"). The Private Parties should note that this Order clarifies a few of those constructions. The contents of this Order supersede the preview of claim constructions provided at the teleconference.

II. PATENTS AND CLAIMS AT ISSUE

The complaint ("Complaint") and NOI identify eight (8) asserted patents and approximately 116 asserted claims: claims 1-3, 5-11, 13-19, and 21-24 of the '011 patent; claims 1, 2, 4-6, and 8-11 of the '394 patent; claims 1, 3, 4, 8, 10, 11, 15, 17, 18, 22, 24, and 25 of the '585 patent; claims 1-3, 5, 7, 9-12, 14, 16, 18, and 28 of the '799 patent; claims 1-3, 5-10, 12, 14-17, 19, and 20 of the '741 patent; claims 1-8, 10-18, and 20 of the '363 patent; claims 1, 2, 4-6, 11, 12, and 14-16 of the '956 patent; and claims 1-4, 7-13, and 17-20 of the '014 patent. (*See, e.g.*, Compl. at ¶ 7; 83 Fed. Reg. 11792 (Mar. 16, 2018).). Patents and claims that remain after Complainants' motions for partial termination are: (1) claims 1 and 9 of the '011 patent; (2) claims 1, 8, and 14 of the '741 patent; and (3) claims 1, 8, 11, 15, and 22 of the '585 patent.

A. U.S. Patent No. 7,779,011

The '011 patent, entitled "Method and System for Dynamically Processing Ambiguous, Reduced Text Search Queries and Highlighting Results Thereof," was filed on December 20, 2005 as U.S. Patent Application Serial No. 11/312,908 ("the '908 application"). (JXM-0001 at (21), (22), (54).). The '908 application claims priority to U.S. Provisional Application Serial No. 60/716,101, filed on September 12, 2005, and U.S. Provisional Application Serial No. 607711,866 filed on August 26, 2005. (*Id.* at (60).). The '908 application issued as the '011

patent on August 17, 2010, and names as inventors Sashikumar Venkataraman, Rakesh Barve, Bangalore, Murali Aravamudan, and Ajit Rajasekharan. (*Id.* at (75).).

Veveo, Inc. owns, by assignment, all right, title, and interest in and to the '011 patent. (*See, e.g.*, *id.* at (73).).[3] The inventors of the '011 patent assigned their rights in the '011 patent to Veveo, Inc. (*See* Compl. at ¶ 58; *see also id.* at Exs. 9, 89.).

The asserted claims of the '011 patent are generally directed towards highlighting characters in search results that are associated with ambiguous characters in a search of an index in which subsets of items are directly mapped to corresponding strings of ambiguous characters. (*See, e.g.*, Doc. ID No. 649474 at 1-2 (Technology Stipulation) (July 5, 2018).). The search involves an overloaded numeric keypad where each key represents a number and at least one alphabetic character (e.g., a single key represents 2, A, B, and C on a conventional telephone keypad). (*Id.*). This guides users toward faster and more precise searches with overloaded keys. (Compl. at ¶ 61.).

B. U.S. Patent No. 7,827,585

The '585 patent, entitled "Electronic Program Guide with Digital Storage," was filed on August 4, 2005, as U.S. Patent Application Serial No. 11/197,867 ("the '867 application"). (JXM-0003 at (21), (22), (54).). The '867 application is a continuation of U.S. Patent Application Serial No. 10/383,281, filed on March 5, 2003, which is a continuation of U.S. Application Serial No. 09/157,256, filed on September 17, 1998. (*Id.* at (63).). The '867 application issued as the '585 patent on November 2, 2010 and names as inventors Joel G. Hassell, Edward B. Knudson, L. Joe Hedges, Michael D. Ellis, and David M. Berezowski. (*Id.* at (45), (75).).

[3] Veveo, Inc., is a wholly-owned subsidiary of Rovi Corporation. (*See* Compl. at ¶ 13.).

Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '585 patent. (*See* Compl. at ¶ 72.). The inventors of the '585 patent assigned their rights in the '585 patent to Prevue Networks, Inc. (*Id.*). Prevue Networks, Inc. changed its name to TV Guide Networks, Inc.; TV Guide Networks, Inc. assigned its rights in the '585 patent to United Video Properties, Inc.; United Video Properties, Inc. merged with UV Corp., which merged with TV Guide, Inc., which merged with Rovi Guides, Inc. (*Id.*; *see also id.* at Exs. 11, 89.).

The asserted claims of the '585 patent are generally directed to providing a user with storage options for storing a program on a random access digital storage device. (*See, e.g.*, Technology Stipulation at 2.). The '585 patent discloses features such as the local interactive program guide ("IPG") that are configured to display program listings, provide a user with an opportunity to choose a program to be recorded on a random access digital storage device, provide the user with an opportunity to select at least one storage option, and for storing the program to be recorded on the digital storage device in accordance with the storage option selected by the user. (Compl. at ¶ 75.).

C. U.S. Patent No. 9,369,741

The '741 patent, entitled "Interactive Television Systems with Digital Video, Recording and Adjustable Reminders," was filed on June 16, 2015, as U.S. Patent Application Serial No. 14/741,034 ("the '034 application"). (JXM-0005 at (21), (22), (54).). The '034 application is a continuation of U.S. Patent Application Serial No. 14/313,348 filed on June 24, 2014, now U.S. Patent No. 9,071,872, which is a continuation of U.S. Patent Application Serial No. 13/866,247, filed on April 19, 2013, now U.S. Patent No. 8,806,546, which is a continuation of U.S. Patent Application Serial No. 13/112,078 filed on May 20, 2011, now U.S. Patent No. 8,799,971 which is a continuation of U.S. Patent Application Serial No. 12/827,046 filed on June 30, 2010, now U.S. Patent No. 7,971,222, which is a continuation of U.S. Application Serial No. 12/350,393

filed on January 8, 2009, now U.S. Patent No. 7,779,445, which is a continuation of U.S. Patent Application Serial No. 10/357,001, filed on January 30, 2003, now U.S. Patent No. 7,493,646. (*Id.* at (63).). The '034 application issued as the '741 patent on June 14, 2016 and names Michael D. Ellis as the inventor. (*Id.* at (45), (75).).

Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '741 patent. (*See* Compl. at ¶ 86.). The inventor of the '741 patent assigned his rights in the '741 patent to United Video Properties, Inc. (*Id.*). United Video Properties, Inc. merged with UV Corp., which merged with TV Guide, Inc., which merged with Rovi Guides, Inc. (*Id.*; *see also id.* at Ex. 13.).

The asserted claims of the '741 patent generally relate to displaying simultaneously with a video (after a specified time after the start time but before the end time configured prior to the start time of the video) an indicator that an archived copy of the video is available, and retrieving the archived copy based on a user response to the indicator. (*See, e.g.*, Technology Stipulation at 2.). This feature permits a user who has tuned in late to a linear broadcast to restart the program from the beginning by determining the existence of and accessing a non-linear (e.g., on-demand) copy of the program. (Compl. at ¶ 89.).

III. TERMS ADOPTED AND CONSTRUED IN THIS ORDER

A. Claim Construction and Ground Rules

Claim terms are construed in this Order solely for the purposes of this Section 337 Investigation. Only claim terms in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm.*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. Am. Sci. & Eng'g. Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Going forward, including during the Hearing scheduled from October 17-19, 2018 and

October 22-25, 2018, the Parties are limited to the claim-term constructions adopted in this Order. Ground Rule 1.14 states that "[t]he parties will be bound by their claim construction positions set forth on the date they are required to submit a joint list showing each party's final proposed construction of the disputed claim terms and will not be permitted to alter these absent a timely showing of good cause." Modified or new claim-term constructions set forth for the first time in post-hearing briefs will be considered to be waived.

Similarly, it will not be appropriate for any party to seek additional claim construction during the Hearing or merely to state that a claim term that may be implicated in an expert report or expert testimony has either a "plain or ordinary" meaning, or that a claim term is "indefinite." (*See* Proposed Scheduling Order and Notice of Ground Rules (Order No. 2 at 6-7; G.R. 1.14 at 9 (Mar. 28, 2018).). If any party posits a "plain and ordinary meaning," it must be explained. (*Id.*).

B. Chart of Constructions in Appendix A

The claim chart attached as Appendix A contains terms for which the Private Parties have agreed to a construction and terms for which the Private Parties dispute the proper construction, broken down by patent. The Private Parties' agreed-upon claim constructions were adopted without providing a rationale or explanation. For disputed terms, here are seven (7) columns in the chart: (1) Term No.; (2) Patent/Claim(s); (3) Term(s) to be Construed; (4) Complainants' Proposed Construction; (5) Respondents' Proposed Construction; (6) the Adopted Construction; and (7) and the Rationale/Support for the Adopted Construction.

IV. APPLICABLE LAW[4]

A. Generally

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

The claims themselves provide substantial guidance with regard to the meaning of disputed claim language. *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Similarly, other claims of the patent at issue, regardless of whether they have been asserted against respondents, may show the scope and meaning of disputed claim language. *Id.*

In cases in which the meaning of a disputed claim term in the context of the patent's claims is uncertain, the specification is "single best guide to the meaning of a disputed term." *Id.*

[4] The constructions of the disputed claim terms in Appendix A generally follow and apply the law cited in this Order. To the extent possible, the case law that applies to a construction is either identified explicitly or implicitly in adopting a party's argument or construction.

at 1321. Moreover, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316. As a general rule, however, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Id.* at 1323.

The prosecution history may also explain the meaning of claim language, although "it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* at 1317. The prosecution history consists of the complete record of the patent examination proceedings before the U.S. Patent and Trademark Office, including cited prior art. *Id.* The prosecution history may reveal "how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*

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

evidence, and "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Phillips*, 415 F.3d at 1318-19.

Extrinsic evidence is a last resort: "[i]n those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

B. Preambles

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

V. PERSON OF ORDINARY SKILL IN THE ART

This is a hypothetical person of ordinary skill and "ordinary creativity." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 420 (2007). "Factors that may be considered in determining [the] level of ordinary skill in the art include: (1) the educational level of the inventor[s]; (2) type of problems encountered in the art; (3) prior art solutions to the problems; (4) rapidity with which inventions are made; (5) sophistication of the technology; and (6) educational level of active

workers in the field." *Envtl. Designs Ltd. v. Union Oil Co. of California*, 713 F.2d 693, 696-97 (Fed. Cir. 1983) (citations omitted). "These factors are not exhaustive but merely a guide to determining the level of ordinary skill in the art." *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F3d 1254, 1256 (Fed. Cir. 2007).). The hypothetical person of skill is also separately presumed to have knowledge of all the relevant prior art in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 693, 697 (Fed. Cir. 1983).

Complainants proposed that a person of ordinary skill in the art would have a bachelor's degree in electrical engineering, computer engineering, computer science, or applied mathematics as well as two or more years of relevant industry experience, including in electronic content delivery, electronic program guides, television video signal processing, graphical user interfaces, cable or satellite television systems, set-top boxes, multimedia systems, or data search techniques. (CMBr. at I (citing Madisetti Decl. at ¶ 7; Madisetti Decl. at ¶¶ 17-23; Balakrishnan Decl. at ¶ 12).).

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

Staff did not offer a definition.

Although Complainants' and Respondents' proposals for the level of ordinary skill are different, the differences are not material. Thus, a person of ordinary skill in the art is defined as one who would have had a bachelor's degree in electrical engineering, computer engineering, computer science, or applied mathematics as well as two or more years of relevant industry

experience, including in electronic content delivery, electronic program guides, television video signal processing, graphical user interfaces, cable or satellite television systems, set-top boxes, multimedia systems, or data search techniques.

VI. PROCEEDINGS GOING FORWARD

A. Supplementation in Response to This Order

The Parties may not file supplemental expert reports in response to this Order. No additional discovery will be permitted because of this Order. No re-argument of the claims construed in this Order may occur.

As the Parties proceed in this Investigation, they will be expected to notify Chambers of any issues that have become moot, or have been eliminated for any reason. The Parties' required outlines that must identify any issues, claims, defenses, prior art, theories, or any other content that was originally asserted or argued, should identify all issues or contentions and patents that have been dropped or become moot for any reason.

The Parties should redact from expert reports and from any other documents upon which they intend to rely any issues, claims, defenses, prior art, theories, or any other content that has been rendered moot or disallowed as a result of this or other Orders, or termination from this Investigation of patent claims or allegations. The Parties must file on EDIS any expert reports or other documents upon which they intend to rely that have been redacted for the reasons stated above, and provide two (2) copies to Chambers.

B. Streamlining the Investigation

To the extent that this *Markman* Order will enable the Parties to streamline the Investigation, the Parties are encouraged to drop issues now in advance of the Hearing scheduled for October 17-19, 2018 and October 22-25, 2018. Moreover, the Parties are encouraged promptly to resolve each issue in this Investigation for which there is no reasonable dispute or

little, or weak, evidentiary support.

C. Settlement

It is strongly recommended that the Parties take informal opportunities to engage in settlement.

VII. CONCLUSION

The construction of the agreed-upon claim term listed in Chart A in Appendix A is also adopted by this Order. Constructions of the disputed claim terms are adopted by this Order for the reasons discussed in Chart B in Appendix A.

Within seven (7) business days of the date of this document, each party shall submit to the Office of the Administrative Law Judges a statement as to whether or not it seeks to have any confidential portion of this document (including Charts A and B) deleted from the public version.[5] Any party seeking redactions to the public version must submit to this office two (2) copies of a proposed public version of this document pursuant to Ground Rule 1.10 with yellow highlighting clearly indicating any portion asserted to contain confidential business information.

The Parties' submissions may be made by facsimile and/or hard copy by the aforementioned date. In addition, an electronic courtesy copy is required pursuant to Ground Rule 1.3.2.

The Parties' submissions concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

Mary Joan McNamara

Mary Joan McNamara
Administrative Law Judge

[5] This means that parties that do not seek to have any portion of this Order redacted are still required to submit a statement to this effect.

INV. NO. 337-TA-1103: APPENDIX A TO ORDER NO. 41

I. U.S. PATENT NO. 7,779,011[1]

A. Agreed Terms[2]

Claim(s)	Term	Agreed Construction
'011 patent - 1, 9	"prefix substring(s)"	"a variable length string of characters that contains fewer than all the characters making up the word."[3]

[1] Complainants in this Investigation are Rovi Corporation, Rovi Guides, Inc., and Rovi Technologies Corporation, of San Jose, California, and Veveo, Inc. of Andover, Massachusetts (collectively, "Complainants" or "Rovi"). Respondents are Comcast Corporation, Comcast Cable Communications, LLC, Comcast Cable Communications Management, LLC, Comcast Business Communications, LLC, and Comcast Holdings Corporation, all of Philadelphia, Pennsylvania, and Comcast Shared Services, LLC of Chicago, Illinois (collectively, "Respondents" or "Comcast," and with Complainants, "the Private Parties"). Commission Investigative Staff ("Staff," and with the Private Parties, "the Parties") has limited participation in this Investigation and did not propose claim constructions.

[2] On August 10, 2018, the Private Parties filed a joint chart setting forth their post-*Markman* hearing claim constructions ("Joint Post-Markman CC Chart"). (Doc. ID No. 652733 (Aug. 10, 2018).). The agreed upon and disputed claim terms in Appendix A are based on this Joint Post-Markman CC Chart.

[3] On June 15, 2018, the Private Parties each filed a claim construction brief. (Complainants' Initial Claim Construction Brief ("CMBr.") (Doc. ID No. 647981 (June 15, 2018); Respondents' Initial Claim Construction Brief, Doc. ID No. 647995 (June 15, 2018).). On June 27, 2018, Respondents filed a corrected Initial Claim Construction Brief. (Respondents' Corrected Claim Construction Brief ("RMBr.") (Doc. ID No. 648940) (June 18, 2018).).

B. Disputed Terms

Term No.	Claim(s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
1	'011 patent - 1, 9	Preamble	The preamble is not limiting.	The preamble is limiting.	The preamble is limiting, but it limits only the "environment" in which the invention operates and does not recite additional steps or components in the claimed invention, per *Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps limit only the claimed environment, not the claimed method or system).	The Private Parties dispute whether the preambles of asserted independent claims 1 and 9 are limiting. Rovi contends that each preamble is not limiting. (CMBr. at 9-11.). In the alternative, Rovi asserts that each preamble limits only the "environment" in which the invention operates. (*Id.* at 11.). Comcast argues that each preamble is limiting because it provides "essential structure, which is necessary to give life to the claims[.]" (RMBr. at 17.). Comcast does not address whether the preambles limit only the "environment" of the invention or, alternatively, recite additional claim limitations in the form of method steps or system components. Preamble language is subject to a rebuttable presumption that the language is not limiting. *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1347 (Fed. Cir. 2012); *Marrin v. Griffin*, 599 F.3d 1290, 1294–95 (Fed. Cir. 2010) (holding in favor of the "presumption against reading a statement of purpose in the preamble as a claim

						limitation"); *Application of Rockwell*, 150 F.2d 560, 562 (CCPA 1945) (stating the "general rule . . . that the introductory clause of a claim which states only the environment, intended use or purpose of the structure later recited in the claim is not a limitation on the subject matter"). Courts have found preambles limiting where "limitations in the body of the claim rely upon and derive antecedent basis from the preamble." *Pacing Techs., LLC v. Garmin Int'l, Inc.*, 778 F.3d 1021, 1023-24 (Fed. Cir. 2015); *Novatek, Inc. v. Sollami Co.*, 559 Fed. App'x 1011, 1016 (Fed. Cir. 2014) (nonprecedential); *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 687 F.3d 1300, 1311 (Fed. Cir. 2012), vacated in part on other grounds, 134 S. Ct. 1744 (2014). Here, several limitations in the body of each independent claim of the '011 patent derive antecedent basis from language in the preamble. Accordingly, each preamble is an essential component of the claimed invention that also limits the invention's scope. *See Eaton Corp. v. Rockwell Int'l. Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003). Even when limiting, a preamble may limit only the "environment" in which the

						invention operates, rather than requiring additional steps or components in the claimed invention. *Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1375 (Fed. Cir. 2011) ("*Fiserv*") (holding that the preamble steps limit only the claimed environment, not the claimed method or system). As mentioned above, Comcast has not addressed the extent to which the preambles at issue are limiting. *See Fiserv* at 1375 ("Fiserv offers no reason why the antecedent basis, dependent claims, specification, or prosecution history would affect Advanced Software's theory that the preamble steps limit only the claimed environment, not the claimed method or system.") Here, the preambles limit only the environment in which the claimed inventions operate. For example, the preamble of claim 1, a method claim, does not recite method steps. (JXM-0001 at 8:40-46.). Instead, it provides environmental context for the claim. (*Id.* at 8:41-46 ("from a keypad with overloaded keys in which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with

						information describing the item comprising one or more words"). Consequently, the preambles of claims 1 and 9 do not contain additional required steps or components. Instead, they clarify the setting in which the steps or components must occur. *Advanced Sofiware Design Corp.*, 641 F.3d at 1374.
2	'011 patent – 9 (preamble)	"a computer readable medium comprising instructions for causing a computer system to:"	The preamble is not limiting. If found limiting, the language requires no construction because it is used in its plain and ordinary sense. If a construction is adopted, the recited phrase should be construed as: "one or more computer-readable medium	"one or more computer-readable media, at least one of which stores all the instructions for causing the computer system to perform the recited steps"	The preamble is limiting as explained above (limits only the "environment" in which the invention operates) per *Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps limit only the claimed environment, not the claimed method or system). The proper construction is "one computer readable medium, or two or more computer-	Comcast asserts that this preamble requires that at least one computer readable medium store all the instructions for causing the system to perform all the recited steps. (RMBr. at 18.). Rovi contends that Comcast's construction is overly narrow given that "words of the preamble themselves dictate that a single computer-readable medium need not contain all the instructions for performing the recited elements" and that Comcast's construction reads out preferred embodiments in the specification and thus conflicts with intrinsic evidence. (CMBr. at 14-15.). Rovi's argument appears to be correct. Claim 9 covers a system, not a single apparatus. The claimed system in the patent indexes information, receives a search query from a user, and orders items on a display device. (JXM-0001 at 9:46-10:15.). Comcast's position, requiring that one medium in the system "stores all the

			contains instructions for causing the computer system to perform the recited steps."		readable media, individually or collectively containing instructions for causing the computer system to perform the recited steps."	instructions for causing," is inconsistent with the specification. The specification allows configurations of various computer readable media with different media performing different claimed steps. For example, the patent teaches that "maintaining search spaces locally may not be practical in many devices that have limited local memory, making a network based search configuration preferable." (*Id.* at 5:12-15.). The patent provides the following additional teachings with respect to system components potentially operating across computer readable media: "FIG. 3 illustrates multiple exemplary configurations for search devices in accordance with various embodiments of the invention. In one configuration, a search device (e.g., devices 206, 208, 210) can have a display 302, a processor 304, volatile memory 306, text input interface 308, remote connectivity 310 to the server 202 through the network 204, and a persistent storage 312. A device configuration for a device such as the hand-held device 206 might not include local persistent storage 312. In this case, the device 206 could have remote connectivity 310 to submit the query to the server 202 and retrieve results from it. Another configuration of the devices 206, 208, 210 may not have remote connectivity

						310. In this case, the search database may be locally resident on a local persistent storage 312. The persistent storage 312 may be, e.g., a removable storage element such as SD, SmartMedia, CompactFlash card etc. In a configuration of the device with remote connectivity 310 and persistent storage 312 for performing searches (e.g., a television system 208), the device may use the remote connectivity for search relevance data update or for the case where the search database is distributed on the local storage 312 and on the server 202. A preferred configuration in a memory constrained device is the search data residing remotely on a server. Unlike composition applications where the 'most frequently used or popular terms space' are small in size and can be maintained in a local vocabulary, search spaces are typically larger inherently because people instinctively use unique word 'signatures' to recall an item of interest." (*Id.* at 4:52-5:12.). Comcast complains that Rovi failed to offer a timely construction for this preamble. (RMBr. at 18-19 n.5.). While that might be true, this Order does not default to Rovi's construction or adopt it word-for-word. Instead, recognizing that claim construction is a matter of law, this Order crafts a construction that is true to the intrinsic

						evidence and correctly rejects Comcast's attempt to advance an unduly narrow construction.
3	'011 patent - 1, 9	"items"	"unit of information"	Plain and ordinary meaning, which is "things the search query is directed at identifying."	"information units, each with a name comprising one or more words"	The Private Parties dispute the proper scope of the term "items." Rovi seeks a very broad construction that equates "items" in the context of the '011 patent with any unit of information. (CMBr. at 16.). Comcast, on the other hand, attempts to limit "items" to "things the search query is directed at identifying." (RMBr. at 21-22.). Neither proposed construction is correct. The specification of the '011 patent teaches that "items" include "television content items" and "database items" like "directories of people or businesses," "products/services like airline tickets," "airline and train schedules," and "audio and/or video content." (JXM-0001 at 3:66-4:16.). "In the context of television systems, the term 'television content items' can include a wide variety of video/audio content including, but not limited to, television shows, movies, music videos, or any other identifiable content that can be selected by a television viewer." (*Id.*). While the specification teaches that "items" covers a wide variety of information, "[e]ach

						of the items has a name comprising one or more words." (*Id.* at 3:24-25.). The adopted construction recognizes this. Rovi's overly broad proposed construction ignores this limitation. The adopted construction also recognizes that "items" exist separate and apart from user search queries. In the context of claims 1 and 9, "items" are indexed before a user search query occurs. (*Id.* at 8:47-60, 9:46-60 ("index said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes. . . for various search query prefix substrings ... subsequent to said indexing, receiving for a user a search query for desired items").). While claims 1 and 9 relate indexing of items to user search functionality, these claims do not require the display of a given item in response to a user search query. Thus, any proper construction of "items" must be broader than search results. Such a construction must possess the breadth to cover items that might never appear in response to a user search. In other words, the legally correct construction of "items" must be broad enough to provide meaningful guidance in all the contexts in which the term operates. *Markman v. Westview Instruments, Inc.*, 517

						U.S. 370, 389 (1996) ("[A claim] term can be defined only in a way that comports with the instrument as a whole."); *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) ("[C]laims are interpreted with an eye toward giving effect to all terms in the claim."); *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("[A] claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent."); *Phonometrics, Inc. v. Northern Telecom Inc.*, 133 F.3d 1459, 1465 (Fed. Cir. 1998) ("A word or phrase used consistently throughout a claim should be interpreted consistently."). This is accomplished by untethering "items" from search query results, which Comcast's construction fails to accomplish.
4	'011 patent - 1, 9	"directly mapped"	"each alphanumeric character of a prefix substring for at least one word in the information associated with an item	"each alphanumeric character of a search query prefix substring associated with an item is matched with its	"each alphanumeric character of a prefix substring associated with an item is matched with its corresponding numeric key equivalent on an overloaded keypad"	Here, the Private Parties' dispute appears to concern which alphanumeric characters are matched with their "corresponding numeric key equivalent on an overloaded keypad." Rovi contends that alphanumeric characters pertain to words "in the information associated with an item" and that mapping occurs before users enter search queries. (CMBr. at 19-20.). Comcast contends that the mapped alphanumeric characters pertain

			is matched with its corresponding numeric key equivalent on an overloaded keypad"	corresponding numeric key equivalent on an overloaded keypad"		to *search query* prefix substrings, which potentially suggests that searching can occur before mapping. (RMBr. at 25.). According to Rovi, Comcast's construction is tantamount to putting the cart before the horse. (CMBr. at 19.). "Directly mapped" is not defined in the specification. As explained above in the context of "items," direct mapping occurs before a search query ensues. That much appears clear. (JXM-0001 at 8:59-60 ("subsequent to said indexing, receiving from a user a search query").). However, claims 1 and 9 do require that "subsets of items are directly mapped to the corresponding strings of unresolved keystrokes *for various search query prefix substrings*." (*Id.* at 8:49-52, 9:49-51.). Consistent with the specification, this claim language reflects mapping potential search queries to subsets of items before any search queries occur, which supports Rovi's construction. (*Id.* at 3:43-49 ("the search space containing the searchable items is initially indexed by performing a many-to-many mapping from the alphanumeric space of terms to numeric strings corresponding to the various prefixes of each alphanumeric term constituting the query string."). Rovi's interpretation is consistent with claims 1 and

						9 requiring mapping "for" "search query prefix substrings," not in response to user search queries. (*Id.* at 8:51-52, 9:51-52.). That said, there is no reason to limit the construction of "directly mapped" to "search query prefix substring[s]" as opposed to "prefix substring[s]." Doing so invites confusion over whether mapping occurs before searching. Also, claims 1 and 9 explicitly tie direct mapping to "search query prefix substrings," "search quer[ies]," and search results. (*Id.*). Consequently, there is no need to use the construction of "direct mapping" to make the connection between mapping and searching, as Comcast has done. Like Comcast, Rovi tries to import limitations into its construction of "directly mapped." Specifically, Rovi attempts to characterize the mapping as "for at least one word in the information associated with an item." Yet, in claims 1 and 9, it appears that "directly mapped" must be broad enough to cover words pertaining to items themselves in addition to information associated with items. (*Id.* at 6:58-65 ("In an exemplary search of a movie database, the matches could be a direct match on terms representing a title (e.g., for the search query

						"go mu', a match could be the movie title Gods Must Be Crazy) or it could be matched on terms representing different types of information (e.g., if a user is searching for a movie starring Tom Hanks that features volleyball, he or she may enter the search query 'to vo' to get the result: Tom Hanks Volleyball)."). The system appears to search on both. Moreover, "directly mapped" must be broad enough to cover words *and* numbers, as the "determining" steps of claims 1 and 9 associate "letters and numbers present in the information associated with and describing the indexed items" with the claimed direct mapping. (*Id.* at 8:53-58, 9:53-58.). Consequently, Rovi's proposed construction of "directly mapped," like Comcast's, is too narrow. The proper construction covers all types of alphanumeric characters (a letter or a number) associated with an item, including such characters found in the item's name and information associated with the item. Unlike Rovi and Comcast's proposed constructions, the adopted construction comports in breadth with the Patent Trial and Appeal Board's ("PTAB") construction of "direct mapping," a term found in U.S. Patent No. 8,433,696 (the "'696 patent"), which Rovi asserted against Comcast in the

						Southern District of New York. In its decision instituting review, the PTAB "preliminarily construe[d] the term 'direct mapping' to mean 'matching each alphanumeric character of a descriptor identifying a content item with its corresponding numeric key equivalent on an overloaded keypad." (RXM-0005 (*Comcast Cable Commc'ns, LLC v. Veveo Inc.*, IPR2017-00715, Paper 8 at 10 (P.T.A.B. July 28, 2017).). The PTAB's construction is similar in scope to the adopted construction of "each alphanumeric character of a prefix substring associated with an item is matched with its corresponding numeric key equivalent on an overloaded keypad."

II. U.S. Patent No. 7,827,585

A. Agreed Terms

Claim(s)	Term	Agreed Construction
1	Preamble	The preamble is limiting

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B. Disputed Terms

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
1	1, 8, 15, 22	"random access digital storage device"	a digital storage device capable of transferring information to or from memory and accessing memory locations directly rather than being accessed in a fixed sequence.	"A storage device in which any location can be accessed in some fixed amount of time that is independent of its position or address."	"a digital storage device that can access memory locations in a non-sequential manner"	For this term, Rovi and Comcast offer long, unwieldy constructions divorced from the intrinsic evidence. Perhaps with an eye toward evidence it intends to present in support of infringement allegations, Rovi wants "random access digital storage device" construed to cover a hard drive. (CMBr. at 23.). Comcast, on the other hand, wants the term construed in a way that distinguishes a hard drive from a "random access digital storage device." (RBr. at 36.). The adopted construction ignores the Private Parties' respective infringement and non-infringement arguments and instead hews to the intrinsic evidence and pays attention to the prosecution history. The phrase "random access digital storage device" is not explicitly construed in the patent specification. The specification mentions that "digital storage device may be an optical or a magnetic storage device (e.g., a device using writable digital video discs, magnetic disks, or a hard drive or random access memory (RAM), etc.)." (JXM-0003 at 2:18-21; *see also id.* at 14:30-35 ("the program guide may store or update directory entry information according to the current viewer preferences (described below) in a central storage area (e.g., random access memory (RAM) or a central hard disk drive)").). However, considering the discussion that follows, it is unclear from these passages which "digital storage devices" qualify as a "random access digital storage device."

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						Rovi and Comcast each relied upon extrinsic evidence in support of its proposed construction rather than the intrinsic evidence. However, extrinsic evidence is of limited value here because there is compelling intrinsic evidence in the prosecution history. Specifically, "random access" was added to "digital storage device" in the claims at issue during prosecution to distinguish the claimed "digital storage device" from a "sequential access [digital] storage device," such as a "digital video tape." (JXM-0011 at 11 (Bates No. ROVI_COMP-ITC00006489-6501).). Citation to Prosecution History Showing Patentee Disclaiming Sequential Access Storage Devices, Such as Digital Video Tapes In particular, taking the Examiner's combination of applying digital storage to the teachings of Young, the digital recording mode disclosed in Young, would enable a user to control the recording speed at which programs are stored on a digital video tape or other sequential access storage device. The amended independent claims require the digital storage device to be a random access digital storage device. Therefore, even if Young were modified with the digital storage of Barton, the modified device would not disclose the provision of a storage option that relates to a storage setting configured to control storage of programs on a random access digital storage device. (*Id.* at 20 (Bates No. ROVI_COMP-ITC00006499).). Consistent with this distinction between sequential and non-sequential digital storage devices, but not coextensive with it,

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						the specification teaches that the claimed invention may store data in a non-contiguous manner: "Before recording a new program and associated program data, the program guide may automatically cause digital storage device 49 to search for available space, and may store the program and associated program data anywhere on digital storage device 49 (e.g., between two other programs). The program and associated program data may even be stored in non-contiguous space on the storage medium." (JXM-0003 at 9:3-9.). Rovi attempts to equate sequential (how memory units are accessed) and contiguous (the spacing of things stored in memory). The concepts are related but not the same. The patentee made clear in the specification that the invention could cover non-contiguous storage of programming. The patentee made clear in the prosecution history that the invention did not cover "sequential access digital storage." The proper construction of "random access digital storage device" should cover the former (non-contiguous storage) while clearly disclaiming the latter (sequential access). That is achieved by the adopted construction.
2	8	Preamble	The preamble is not a limitation	The preamble is limiting.	The preamble is limiting, but it limits only the "environment" in which the invention operates and	Rovi contends that this preamble is not limiting because the "'interactive television program guide' is referenced in the preamble, but not referred to in the body of the claim," which is a "clear indication from the patentee of an intention to define the invention in the body of the claim." (CMBr. at 30.). According to Comcast, the preamble is limiting because it is "necessary to understand the subject matter and structural context of the claim" and "provides the only explicit reference in claim 8 to the

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
					does not require additional steps or components in the claimed invention, per *Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps can limit only the claimed environment, not the claimed method or system).	interactive program guide or the user equipment." (RMBr. at 45.). Preamble language is subject to a rebuttable presumption that the language is not limiting. *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1347 (Fed. Cir. 2012); *Marrin v. Griffin*, 599 F.3d 1290, 1294–95 (Fed. Cir. 2010) (holding in favor of the "presumption against reading a statement of purpose in the preamble as a claim limitation"); *Application of Rockwell*, 150 F.2d 560, 562 (CCPA 1945) (stating the "general rule . . . that the introductory clause of a claim which states only the environment, intended use or purpose of the structure later recited in the claim is not a limitation on the subject matter"). "The effect preamble language should be given can be resolved only on review of the entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989). "When the preamble is essential to understand limitations or terms in the claim body, the preamble limits claim scope." *MEMS Tech.*, 447 Fed. Appx. at 154; *see also Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1357-58 (Fed. Cir. 2012) (preambles are limiting when "necessary to understand the subject matter encompassed by the claim...."); *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1306 (Fed. Cir. 1999) (preambles are limiting when "intimately meshed with the

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						ensuing language in the claim" and do not describe "the invention's intended field of use"). Here, the preamble is essential to understand limitations or terms found in the body of the claim. For example, "program" and "program listing" make little sense outside the context of the preamble's recitation of "interactive television program guide." Moreover, as Comcast argues, the specification of the '585 patent makes clear that an "interactive television program guide" is a fundamental characteristic of the invention. (RMBr. at 43 (citing *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1358 (Fed. Cir. 2012) (preamble "rotary cutter deck" is limiting where "the specification repeatedly refers to the 'present invention' as 'an improved deck for a rotary cutter' . . . [and] explains that the invention addresses a concern specific to rotary cutters").). The title of the patent is "electronic program guide with digital storage." (JXM-0003 at Title.). Accordingly, the preamble is an essential component of the claimed invention that also limits the invention's scope. *See Eaton Corp. v. Rockwell Int'l. Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003). However, the preamble limits only the "environment" in which the invention operates. *See Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps limit only the claimed environment, not the claimed method or system). There is no indication from the intrinsic evidence that the patentee intended the preamble to add

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						additional steps to the claimed method, as opposed to setting forth the environment in which the method steps occur.
3	1, 8, 15, 22	"interactive television program guide"	An interactive guide capable of generating a display of television program listings. Alternative: an application, including a distributed application, that allows user navigation through and interaction with television program listings and causes	"an application that allows user navigation through and interaction with television program listings and causes display of program information on user television equipment based on user commands"	"an application that generates a display of television program listings on user television equipment and that allows users to navigate through and interact with television program listings based on user commands"	Rovi argues that "interactive television program guide" is part of a system and is not limited to a single "application." (CMBr. at 30.). Comcast counters that "interactive television program guide" is an application "allowing user interactivity" and "displaying program information on [user] television equipment." (RMBr. at 50.). According to Comcast, "Rovi's construction asks the ALJ to capture any 'display of television program listings' regardless of where or how, and without limitation to the television equipment described throughout the patent as a basic characteristic of the described guide." (*Id.* at 51.). The specification teaches that "[e]ach user has user television equipment 22 for displaying the television program listings information using an interactive television program guide." (JXM-0003 at 3:20-22.). "The program guide implemented on the set top box processes television program listings information and generates display screens (e.g., an interactive television program guide grid) for display, e.g., on a standard television monitor. The user can interact with the television program guide by entering commands via a user input interface." (*Id.* at 2:7-12.). "To access the features of the program guide, the user instructs the program guide implemented on user television equipment 22 to generate a main menu or a desired program

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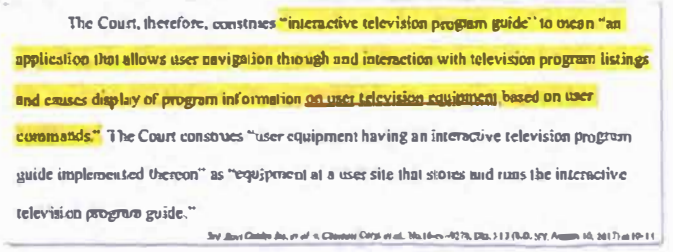
Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
			display of program information on user television equipment based on user commands			guide display screen for display on monitor 45." (*Id.* at 4:55-58.). The "interactive television program guide" is clearly some sort of application. According to the specification, it "processes," "generates," and "interacts." Rovi seems to acknowledge this in its alternative construction, while reserving the issue of whether the application can be distributed or, conversely, must reside only on user television equipment. That is the crux of the disagreement between the Private Parties over the next disputed term: "implemented on user television equipment." The specification makes clear that the "interactive television program guide" generates a display of program information and facilitates user interaction. The adopted construction captures these two functions. The adopted construction also comports with the construction of "interactive television program guide" by the Southern District of New York, in a litigation between Rovi and Comcast over alleged infringement of U.S. Patent No. 8,713,595: "an application that allows user navigation through and interaction with television program listings and causes display of program information on user television equipment based on user commands." (RXM-0003 (Claim Construction Order in *Rovi Guides Inc. et al. v. Comcast Corp. et al.*, No. 16-cv-9278, Dkt. 313 (S.D.N.Y.)) at 10-14.). The main difference between the adopted construction and the SDNY's construction is that, as compared to the latter, the former makes a clearer

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						association between user commands and navigation through, and interaction with, the guide. (*Id.*). Construction of "Interactive Television Program Guide" in S.D.N.Y. Litigation **The SDNY Constructions**  The Court, therefore, construes "interactive television program guide" to mean "an application that allows user navigation through and interaction with television program listings and causes display of program information on user television equipment based on user commands." The Court construes "user equipment having an interactive television program guide implemented thereon" as "equipment at a user site that stores and runs the interactive television program guide." (*Id.*)
4	1, 8	"implemented on user television equipment"	a device or devices capable of generating a display of television program listings information using an	"television equipment at a user site that stores and runs the interactive television program guide"	"implemented, at least in part, at a user site on television equipment for receiving and processing television program	As mentioned above, the Private Parties dispute whether this limitation contains a physical location requirement that restricts implementation of the "interactive television program guide" solely to user television equipment. Comcast takes a narrow view, arguing that "the claim language and specification tells the reader that television equipment of the user alone is what executes the 'interactive television program guide' within the claims, and that only such television equipment at a user site was ever contemplated by the named inventors." (RMBr. at 54.). Rovi disagrees, asserting that "[t]he patent does not require

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
			interactive electronic program guide		listings and program data"	the interactive television program guide to reside locally nor prohibit it being a distributed system (e.g., with parts residing both locally and remotely)." (CMBr. at 31-32.). The adopted construction comports with the specification. Part of the adopted construction parrots language from the specification that addresses the purpose of "user television equipment": "The user television equipment for receiving and processing the television program listings and program data may include a set-top box." (JXM-0003 at 2:3-5.). User television equipment is depicted in Figures 1-3 of the '585 patent, as shown below. Figure 1 shows an illustrative system, including user television equipment, "in accordance with the present invention." (*Id.* at 2:62-63.).

Figure 1 of the '585 Patent

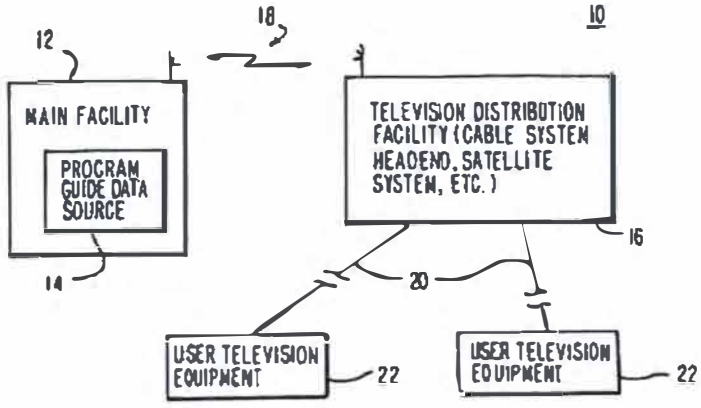

FIG. 1

(*Id.* at Fig. 1.).

Figure 2 "is a schematic block diagram of illustrative user television equipment in accordance with the present invention." (*Id.* at 2:49-51.).

Figure 2 of the '585 Patent

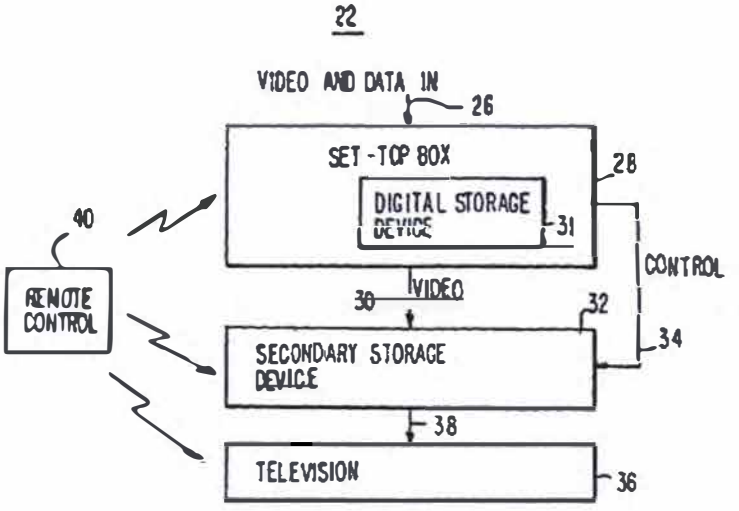

FIG. 2

(*Id.* at Fig. 2.).

Figure 3 is "a generalized schematic block diagram of portions of the illustrative television equipment of FIG. 2." (*Id.* at 2:52-53.).

Figure 3 of the '585 Patent

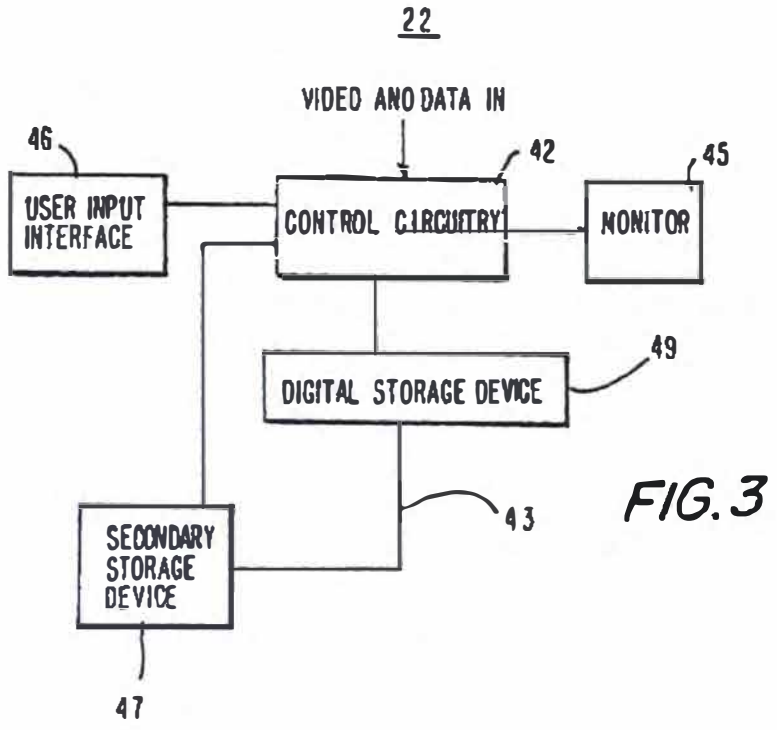

FIG. 3

(*Id.* at Fig. 3.).

The '585 patent teaches a "[a]n interactive television program guide system." (*Id.*, Abstract.). In furtherance of that system, the '585 patent teaches the delivery of program guide content to user television equipment from a television distribution facility: "Television distribution facility 16 distributes the television program listings and additional data to multiple users via

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						communications paths 20. Each user has user television equipment 22 for displaying the television program listings information using an interactive television program guide. Communication paths 20 preferably have sufficient band width to allow television distribution facility 16 to distribute television programming to user television equipment 22. If desired, television programming may be provided over separate communications paths (not shown)." (*Id.* at 3:18-27.). The specification also teaches that "[t]he television distribution facility distributes the information (and television programming signals) to user television equipment on which an interactive television program guide is implemented." (*Id.* at 1:63-66.). This language resembles the limitation under construction. Claims 1 and 8 of the '585 patent require implementation of the guide on user equipment. (*Id.* at 18:47-48, 19:21-22.). Claims 1 and 8 of the '585 patent do not require implementation of the guide *only* on user equipment. The adopted construction of "interactive television program guide" articulated above does not require that it operate only on user equipment. The specification of the '585 patent teaches a distributed "interactive television program guide system" in which "television distribution facility," separated from user television equipment, provides display components in the form of "television program listings and additional data." (*Id.* at 3:18-19.). The specification also teaches the functions of control circuitry on user television equipment "integrated into an advanced television receiver, personal computer television (PC /TV), *or any other suitable*

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						arrangement" and that "*a combination of such arrangements may be used*." (*Id.* at 4:59-64 (emphasis added).). Comcast is correct that the specification does not provide a detailed disclosure of an "interactive television program guide" application running in a distributed fashion across the system, much less a preferred embodiment of the same. However, as explained above, the '585 patent treats "interactive television program guide" in a holistic manner, inclusive of functions that occur within "[a]n interactive television program guide system" but not necessarily on user television equipment. Moreover, nothing in the intrinsic evidence appears to foreclose a distributed "interactive television program guide" embodiment. Instead, claims 15 and 22 of the '585 patent recite "an interactive television program guide implemented at least partially on circuitry," providing at least some additional support for disclosure of a distributed embodiment. Finally, the adopted construction comports with Comcast's claim construction position in the Southern District of New York, in that litigation between Rovi and Comcast over Comcast's alleged infringement of U.S. Patent No. 8,713,595. There, Comcast clearly stated: "We do not take the position that the interactive program guide has to exist solely inside the user's home." *Rovi Guides, Inc. v. Comcast Corp.*, Case No. 16-cv-9278 (Oetken, J.), Markman Hearing Transcript, dated July 7, 2017, at 93. The adopted construction also comports with Judge Shaw's observation in 337-TA-1001 that "interactive television program guide," as used in U.S. Patent No. 8,006,263, need not

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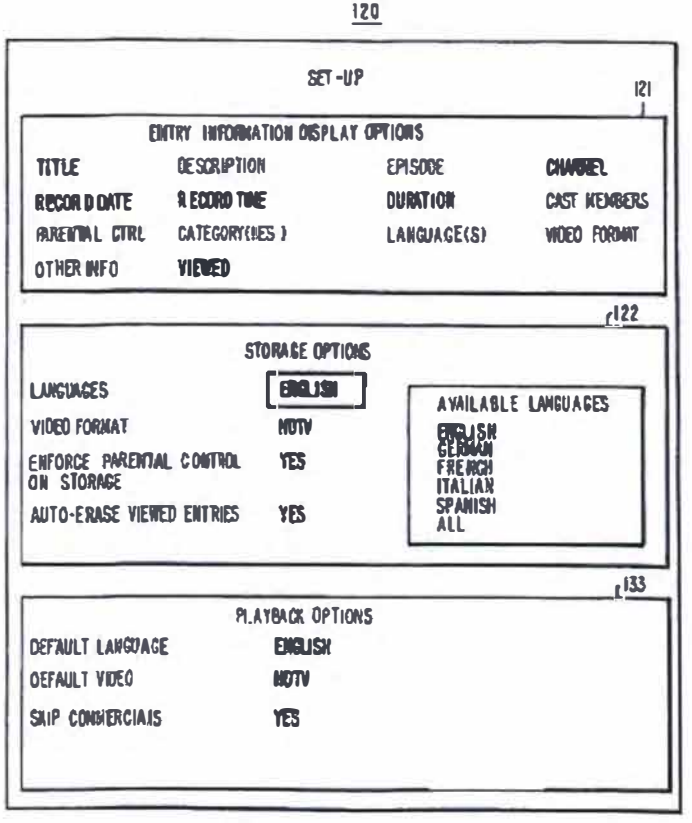
Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						"be solely 'inside a user's home.'" *Rovi v. Comcast*, Inv. No. TA-337-1001 (ITC 1), Initial Determination, Construction of Term "local interactive television program guide" for Patent No. 8,006,263 (adopted by the Commission).
5	1, 8, 15, 22	"storage setting configured to control how [programs are/the program is] to be digitally stored" in context of "providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at	This phrase is not a means-plus-function term. It should be construed pursuant to its plain and ordinary meaning: software or device storage configuration controlling how [programs are/the program is] to be digitally stored	This is a means-plus-function term. Function: control how [programs are/the program is] to be digitally stored Structure: This term is indefinite for a lack of sufficient corresponding structure in the specification. To the extent	This phrase is not a means-plus-function term. "storage setting configured to control how [programs are/the program is] to be digitally stored"	Rovi and Comcast contest whether this term is a means-plus-function term. Rovi argues that § 112, ¶ 6 does not apply. (CMBr. at 35.). Comcast argues that § 112, ¶ 6 does apply and limits this term to corresponding structures disclosed in the specification. (RMBr. at 55.). However, according to Comcast, corresponding structures do not exist in the patent thereby rendering the term indefinite. (*Id.*). The analysis begins with a presumption against treating this term as a means-plus-function term. *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) ("the failure to use the word 'means' . . . creates a rebuttable presumption . . . that § 112, [¶] 6 does not apply."). For the reasons set forth below, Comcast does not overcome this presumption. The specification does not define explicitly "storage setting," much less the entire term at issue here. However, as shown below, Figure 14, "[a]n illustrative setup screen," sets forth exemplary storage settings (e.g., languages, video format) in its "Storage Options" box. (JXM-0003 at 15:36-37, Fig. 14.).

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
		least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device"		any structure related to this term and its claimed functions are disclosed in the patent, it is found at Fig. 14, Box 122; Fig. 16; and 15:51-61, but this structure is insufficient to perform the claimed functions.		Figure 14 of the '585 Patent  FIG. 14 (*Id.* at Figure 14.).

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						With respect to Figure 14, the specification teaches: "Storage option area 122 allows the user to select options relating to storage. For example, the user can select the language tracks or video formats for storing with a program. The user can also set whether a parental control feature applies to the recording of programs which do not meet certain parental control criteria. The user may also choose whether the program guide automatically erases entries from digital storage device 49 once the entries are viewed. When erased, an entry's directory information and additional components are also removed from digital storage device 49." (*Id.* at 15:52-61.). With respect to Figure 16 and "providing the user with the ability to define selectable options," the specification teaches: "FIG. 16 illustrates steps involved providing the user with the ability to define selectable options. At step 424, the program guide provides the user with the opportunity to define storage options. If language, video format, enforcement of parental control, and auto-erase storage options are provided (FIG. 15), the program guide stores the programs and associated program data on digital storage device 49 according to how the storage options are defined as set forth in steps 426, 428, 430, and 432 respectively." (*Id.* at 16:28-36.).

Figure 16 of the '585 Patent

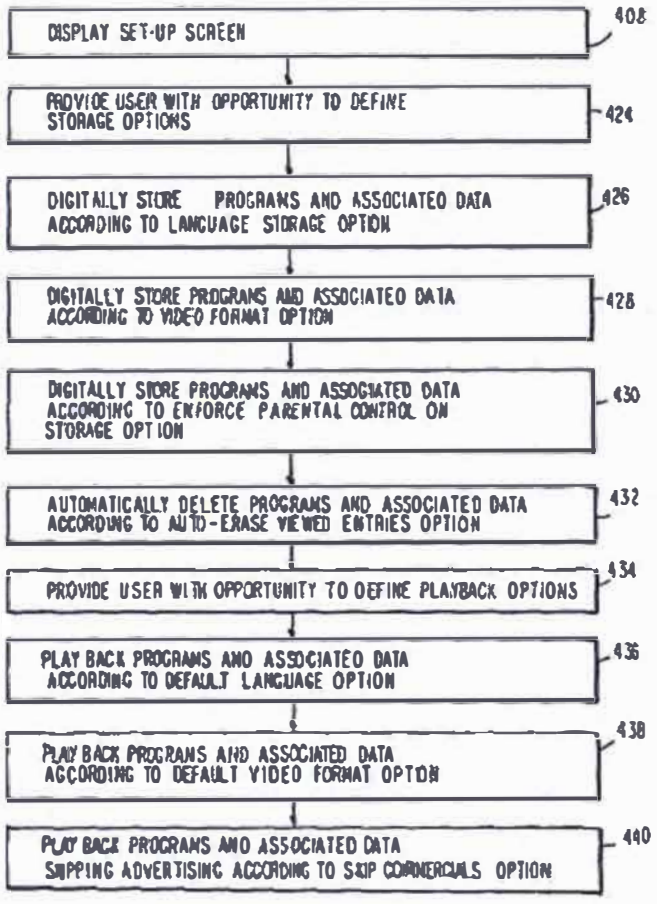

FIG. 16

(*Id.* at Figure 16.).

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						If read in keeping with the specification language, the term "storage setting" denotes sufficient structure to escape § 112, ¶ 6 treatment. The '585 patent treats "storage setting" as a structural component in the form of a variable or parameter. The '585 patent also treats "storage setting" as performing a generic function: "configured to control how [programs are/the program is] to be digitally stored" within the "interactive television program guide" environment. Because means for performing basic storage functions within a computing environment are generic or general-purpose, they are typically not accorded means-plus-function treatment and thus do not require the disclosure of additional structure such as specialized algorithms. *See In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (claims directed at generic functions of "processing," "receiving," and "storing" could be performed inherently, and without specialized programming, by a general-purpose processor and thus did not require construction under Section 112(6)). For these reasons, it would be inappropriate to treat "storage setting ..." as a means-plus-function term and limit its scope only to disclosed, corresponding structures.
6	15,22	"circuitry" in context of "an interactive television program guide implemented	Not 112(6); a circuit or system of circuits performing a particular function in	This is a means-plus-function term. Function:	This word is not a means-plus-function term. "circuitry"	Rovi and Comcast contest whether this term is a means-plus-function term. Rovi argues that § 112, ¶ 6 does not apply. (CMBr. at 36.). Comcast argues that § 112, ¶ 6 does apply and limits this term to corresponding structures disclosed in the specification. (RMBr. at 62.).

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
		at least partially on circuitry, wherein the interactive television program guide is programmed to"	an electronic device. If found to be 112(6), this should be construed as circuitry for performing the functions defined in the claims and with the specific structure defined in the specification or the equivalent thereof.	implement the interactive television programming guide Structure: • Box 42 in Fig. 3; 3:20-22; 4:37-64		The analysis begins with a presumption against treating this as a means-plus-function term. *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) ("the failure to use the word 'means' . . . creates a rebuttable presumption . . . that § 112, [¶] 6 does not apply."). For the reasons set forth below, Comcast does not overcome this presumption. "Circuitry" can be designed or programmed in very different ways to perform very different functions. If those functions are generic, then claiming "circuitry," without more, may connote a sufficient structure. *In re Katz*, 639 F.3d at 1316 (claims directed at generic functions of "processing," "receiving," and "storing" could be performed inherently, and without specialized programming, by a general purpose processor and thus did not require construction under Section 112(6)). The '585 patent does not explicitly define "circuitry." However, the '585 patent teaches that circuitry performs certain functions: "[i]f necessary, processing circuitry in set-top box 28 formats the received video, audio and data signals into a digital file format;" "processing circuitry within set-top box 28 supplies information that is displayed on television 36;" "programming and program data associated with the programming (hereinafter 'associated program data') from television distribution facility 16 (FIG. 1) are received by control circuitry 42 of user television equipment;" "[t]o watch television, the user instructs control circuitry 42 to display a desired television channel on monitor;" and "[c]ontrol circuitry 42 responds to an indication to postpone playback by storing the playback sequence (either in memory or

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						on the digital storage device)." (JXM-0003 at 4:3-5, 4:34-36, 4:39-42, 4:53-55, 13:29-31.). Constructed in keeping with the language of the specification, the term "circuitry" denotes sufficient structure to escape § 112, ¶ 6 treatment. The claimed "circuitry" is performing tasks in the context of an "interactive television program guide" application. Those tasks implement generic functions like receiving user inputs and storing and displaying information. Contrary to Comcast's position, there is no indication that the claimed "circuitry" is performing a specialized function that would require the disclosure of specialized programming or additional structure. For these reasons, it would be inappropriate to treat "circuitry" as a means-plus-function term and limit its scope only to disclosed, corresponding structures.

III. U.S. Patent No. 9,369,741

A. Agreed Terms

Claim(s)	Term	Agreed Construction
1	"storage circuitry for storing archived copies of videos"	Not 112(6) "a circuit or system of circuits for storing archived copies of videos"

B. Disputed Terms

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
1	1, 8, 14	"archived copy" / "archived copies"	stored copy / stored copies Alternative: a copy of a program related to the system-retained copy of the program[4]	"a personal copy of a program created from the system's automatically retained copy of the program"	"a real or virtual copy of a program retained by the system / real or virtual copies of programs retained by the system"	The dispute between the Private Parties pertains to the nature of the copies archived. According to Rovi, the '741 patent treats archived copies as generic and not special in any specific way. (CMBr. at 47-48.). On the other hand, Comcast contends that an "archived copy" is a special type of copy existing within a "interactive television program guide" system that distinguishes between "recordings," "system copies," and "archived copies." (RMBr. at 78-79.). As explained below, this Order does not adopt either of the Private Parties' proposed constructions because each proposed construction deviates from the intrinsic evidence. Contrary to Rovi's position, the specification of the '741 patent draws a clear distinction between archived copies and other types of copies. (*See, e.g.*, JXM-0005 at 26:57-62 ("If desired, the on-screen options that are presented to the user need not distinguish between *archiving operations (in which users are provided with real or virtual "archive" copies)* and recording operations (in which otherwise unsaved material is affirmatively copied and saved as a real or virtual recording).") (emphasis added).). The specification also distinguishes archiving from other on-screen options

[4] According to Comcast, Rovi offered this alternative construction late in time. (Notice of Proposed Claim Constructions (Doc. ID No. 650641 (July 18, 2018)).). Consequently, Comcast opposes consideration of Rovi's alternative construction. (Comcast's Objection to Rovi's Notice of Proposed Claim Constructions (Doc. ID No. 650776 (July 19, 2018)).). While Comcast's objection is noted, this Order does not default to Rovi's construction or adopt it word-for-word. Instead, recognizing that claim construction is a matter of law, this Order crafts an original construction that is true to the intrinsic evidence.

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						presented to users, such as "recording," "archiving," "copying," "saving," "storing, etc." (*Id.* at 26:63-65.). In other words, the '741 patent treats archiving as a unique operation. Contrary to Comcast's position, archiving does not necessarily require the making of a real copy, much less a personal real copy. (*Id.* at 25:40-49 (describing the archiving of a copy by adding "an additional program listing" to the "user's recorded programs list"), 28:21-23 ("process of making a system copy of a program appear in the user's personal set of listings may be referred to as archiving"), 30:13-20 ("archive copy may be made by creating an actual extra copy of the program for the user or by updating an appropriate database or otherwise storing information that indicates that the user has archived a copy of the program. Regardless of whether a real archive copy or a virtual archive copy of the program is created for the user, the user's personal area on the network or the local PVR may be updated accordingly."), Figs. 29-31 (referring, following the user's choice to "archive program," to "optionally" making a separate copy for the user).). The doctrine of claim differentiation also thwarts Comcast's attempt to limit or personalize archived copies to users. *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) ("presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim"). Specifically,

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						independent claim 1 of the '741 patent includes the requirement of "storage circuitry for storing archived copies of videos." (*Id.* at 37:63.). Claim 5, which depends from claim 1, additionally requires the capability of copying "the archived copy to a personal storage area associated with the user," suggesting that archiving in claim 1 is broader than storing a personal copy of a program. (*Id.* at 38:28-30; *see also* 24:53-55 ("[o]ption 314 may be selected if the user wants to archive a copy of the program to the user's personal area.").). Also contrary to Comcast's position, archiving does not require that archived copies come from the system's "automatically" retained copy of a program. The specification discloses at least one embodiment in which an archived copy pertains to a program retained by the system based only on a user's request. (*See, e.g.*, *id.* at 31:9-16 ("Programs that are not stored automatically by the system may be stored upon user request. Periodic housekeeping operations may be used to delete or otherwise remove certain programs from the primary storage areas of the network based or local personal video recorder. To avoid losing ready access to a desired program, the user may wish to archive the program in that user's personal area or local PVR.").). Based on the above, the '741 patent teaches archiving as a distinct but flexible concept for preventing users from losing access to desired programs. As captured by the adopted construction, the specification discloses embodiments in

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						which the "archived copy" is a real or virtual copy of a program retained by the system (automatically or not) that is made available to the user. (*See, e.g., id.* at 28:29-36 ("To avoid losing ready access to a desired program, the user may wish to archive the program in that user's personal area or local PVR. The user may be charged a one-time or periodic fee for this service by the system. Archived *virtual or real copies* can be maintained on the network or local PVR for ready access by the user. Copies that are not archived may be impossible or at least more difficult to access.") (emphasis added).).
2	1, 8	"specified time"	No construction necessary other than within the larger term "a specified time after the start time but before the end time"	"a specified clock time"	"a specific duration of time or at a clock time"	For this term and the one that immediately follows, Rovi and Comcast dispute whether "specified time" is limited to "clock time." Rovi contends that "specified time" is "an incremental (i.e., non-zero) amount of time (perhaps calculated from the start time), not a particular clock time such as 7:05 PM." (CMBr. at 52.). Comcast seeks a narrow construction that restricts "specified time" to a clock time. (RMBr. at 85-86 ("for example, Seinfeld starts at 8 pm on Thursdays and ends at 8:30 pm.").). As explained below, this Order does not adopt either of the Private Parties' proposed constructions because each proposed construction deviates from the intrinsic evidence. Rovi's proposed construction (provided in the context of Term No. 3, "a specified time after the start time but before

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						the end time"), is unusual insofar as the specification of the '741 patent says nothing about non-zero amounts of time. Comcast's proposed construction is unduly narrow given that the specification clearly discloses "specified time" as a concept that covers a specific clock time and a duration of time. For example, while Figure 26 (shown below) discloses specifying a clock time, Figure 28 (also shown below) clearly shows specifying a time based on duration (e.g., in 5 minutes versus at 6:00 pm). (JXM-0005 at 27:16-31 ("If watch later option 310 is selected, the interactive television application may display on-screen options of the type shown in FIG. 28. In the illustrative arrangement of FIG. 28, a menu 316 of deterred reminder time options 320 may be displayed for the user. ... For example, the user may select option 324 to defer the reminder for five minutes or may select option 326 to defer the reminder for thirty minutes. Other options 320 may be used to defer the reminder by other amounts.").).

Figure 26 of the '741 Patent (Specifying a Clock Time)

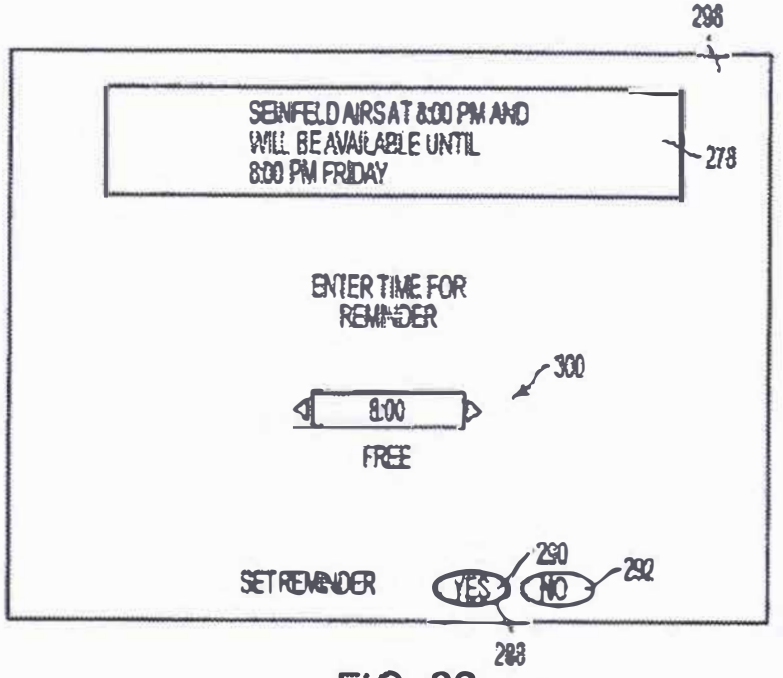

FIG. 26

(*Id.* at Fig. 26.).

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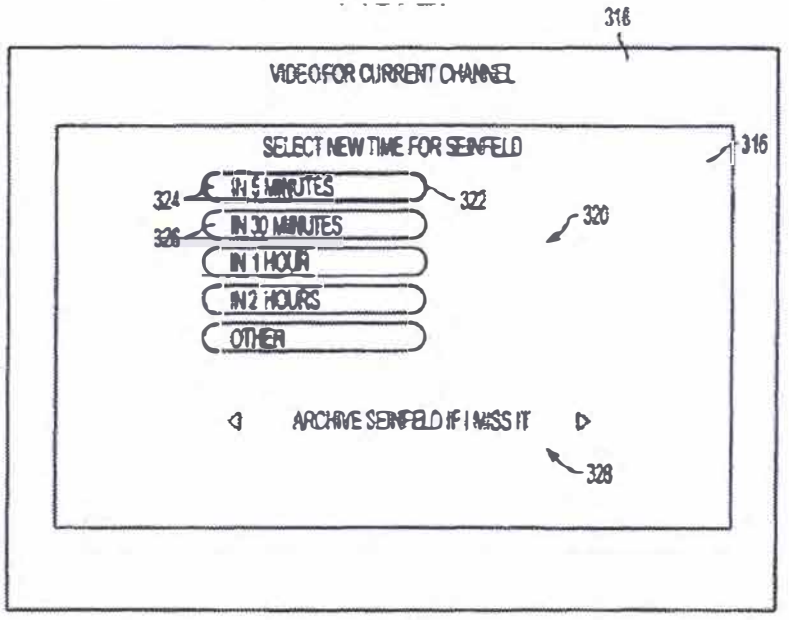
Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						Figure 28 of the '741 Patent (Specifying a Duration of Time)  FIG. 28 (*Id.* at Fig. 28.). For the foregoing reasons, unlike the Private Parties' proposed constructions, the adopted construction comports with the intrinsic evidence.
3	1, 8	"a specified time after the start	a non-zero amount of time after the	"a specified clock time after the start	"a specified duration of	Same as immediately above.

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
		time but before the end time"	start time but before the end time	clock time but before the end clock time"	time or at a clock time that falls after the start time but before the end time"	
4	1, 8	"configured prior to the start time"	defined prior to the start time	"set by the user prior to the start clock time"	"set prior to the start time"	For this term, Rovi and Comcast primarily dispute who or what does the configuring. Comcast proposes a narrow construction pursuant to which a user performs the configuring prior to the start time. (RMBr. at 89.). According to Comcast, "the specification makes clear, a key feature of the invention is to allow the user to set or select viewing times[.]" (*Id.* at 90.). In response, Rovi proposes a construction that is broad enough to cover default configurations not set by users. (CMBr. at 53-55.). Rovi is correct that users need not do the configuring. The '741 patent provides examples of configurations that occur by default. (*See, e.g.*, JXM-0005 at 32:19-20 ("[a]rchiving operations may also be performed by default" by the system).). In the context of reminders, the specification draws a contrast between user-selected timing of reminders and timing of reminders presumably not set by users. (*Id.* at 16:55-58 ("The reminder list may be displayed at any suitable time (e.g., at 0-15 minutes before the program of interest is to begin, at a user-selected time before that program, etc.).").).

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
						The '741 patent does not define "start time." However, based on its plain and ordinary meaning, and usage within the context of claims 1 and 8, Comcast is correct that start time corresponds to clock time. For example, Figure 26 (see above), depicts a "suitable arrangement for setting reminders, discloses that "SEINFELD AIRS AT 8:00 PM AND WILL BE AVAILABLE UNTIL 8:00 PM FRIDAY." (*Id.* at Fig. 26.). In this example, 8:00 PM (presumably on that day) is a start time. Start times (and end times) are fixed points in time. However, because the parties do not appear to dispute this point, and because "specified time" was construed above as not limited to "clock time," "clock time" will not appear in the construction of "configured prior to the start time." Including a concept of "clock time" in the construction would be redundant and potentially invite confusion during the evidentiary hearing ("Hearing") over the phrase "clock time," which is not found in the patent. Finally, the start time is set, not defined. The '741 patent discloses "configuring" in the context of "profile or preference settings." (*Id.* at 16:17-18.). The '741 patent does not necessarily treat "configuring" as something definitional. Thus, in the adopted construction, "set," as proposed by Comcast, is used in place of "defined," as proposed by Rovi.

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
5	1	"control circuitry configured to" "control circuitry" in context of "control circuitry configured to:"	Not 112(6), "a processor or processors configured to . . ." In the alternative: Function: The function of the control circuitry is to (a) transmit a video to a plurality of user equipment; (b) access a database to determine whether an archived copy corresponding to the video is available to a user after the start time; (c)	This is a means-plus-function term. Functions: • transmit a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time; • access a database to determine whether an archived copy corresponding to the video is available to a user after the start time; • based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be	This is a not a means-plus-function claim term. "a processor or processors [configured to]"	Rovi and Comcast contest whether this term is a means-plus-function term. Rovi argues that § 112, ¶ 6 does not apply. (CMBr. at 58.). Comcast argues that § 112, ¶ 6 does apply and limits this term to corresponding structures disclosed in the specification. (RMBr. at 94-96.). According to Comcast, however, corresponding structures do not exist in the patent and, therefore, the claim term is indefinite. (*Id.* at 94.). The analysis begins with a presumption against treating this as a means-plus-function term. *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) ("the failure to use the word 'means' . . . creates a rebuttable presumption . . . that § 112, [¶] 6 does not apply."). For the reasons set forth below, Comcast does not overcome this presumption. The patentee demonstrated an awareness of how to distinguish between ordinary claims and means-plus-function claims. Claim 1 contains no explicit means-plus-function language. By contrast, in claim 15, the patentee used explicit means-plus-function language to claim means for the same functions recited in claim 1. Basically, but erroneously, Comcast argues that claims 1 and 15 use different language to cover the exact same claim scope. The '741 patent teaches "[c]ontrol circuitry 106 may be based on any *suitable processing circuitry 110 such as processing circuitry* based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, etc. memory (e.g., random-access memory and

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
			cause an indication corresponding to the archived copy to be displayed; (d) receive a user response to the displayed indication; and (e) retrieve the archived copy from the storage circuitry Structure: A processor or processors, as described at 11:63-12:40 and shown in Figure 6, programmed to transmit a video to a	displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time; • receive a user response to the indication that is displayed; and • based on the received user response, retrieve, from the storage circuitry, the archived copy Structure: This term is indefinite for a lack of sufficient corresponding structure in the specification. To the extent any structure		read-only memory), hard drives, DVD drives, CD drives, or any other suitable memory or storage devices may be provided as storage 112 that is part of control circuitry 106. Tuning circuitry such as one or more analog tuners, one or more MPEG-2 decoders or other digital video circuitry, or any other suitable tuning or video circuits or combinations of such circuits may also be included as part of circuitry 106. Encoding circuitry (e.g., for converting over the-air or cable analog signals to MPEG signals for storage) may also be provided. The tuning and encoding circuitry may be used by the user equipment to receive and display or play or record a particular television or music channel or other desired audio and video content (e.g., video-on-demand content or requested network-based or local video recorder playback)." (JXM-0005 at 12:10-28.). Thus, the '741 patent clearly links "control circuitry [configured to]" to processing circuitry, which informs the adopted construction. "A microprocessor or general purpose computer, without more, lends sufficient structure only to basic functions of a microprocessor. All other computer-implemented functions require disclosure of an algorithm." *EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 623 (Fed. Cir. 2015). In other words, for generic functions, claiming "control circuitry [configured to]" may connote sufficient structure. *In re Katz*, 639 F.3d at 1316 (claims directed at generic functions of "processing," "receiving," and "storing" could be performed inherently, and without specialized programming, by a general-purpose

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			plurality of user equipment; (b) access a database to determine whether an archived copy corresponding to the video is available to a user after the start time; (c) cause an indication corresponding to the archived copy to be displayed; (d) receive a user response to the displayed indication; and (e) retrieve the archived copy from the	related to this term and its claimed functions are disclosed in the patent, it is found at the citations below, but this structure is insufficient to perform the claimed functions. • Fig. 1, server 36, 56, service provider 50, communications paths, as described in 4:50-5:13 • Fig. 1, server 36, and/or server 56, and/or service provider 50, as described in 6:17-7:38; and/or a processor or processors, as		processor and thus did not require construction under Section 112(6)). As demonstrated by Comcast in its proposed construction column to the left, functions recited in claim 1 are basic or generic in nature and routine for a microprocessor to implement. A general-purpose processor can transmit a video, access a database, cause the display of an indication, receive a user response, and retrieve from storage circuitry. (JXM-0005 at 37:65-38:13.).) It is useful to contrast this finding with the opposite result reached in *Rovi Guides Inc. v. Comcast Corp.*, No. 16-CV-9278 (JPO), 2017 WL 3447989, at *22 (S.D.N.Y. Aug. 10, 2017). The limitation at issue there called for the performance of a specialized function: "processor for performing a first incremental find ... for ordering one or more items found in the first incremental find ... for performing a second incremental find ... for ordering one or more items found in the second incremental find ...." (*Id.*). In this patent, in this Investigation, no such specialized function is present for the "control circuitry" to perform. Consequently, in hewing to the specification language, the term "control circuitry [configured to]" denotes a sufficient structure to escape § 112, ¶ 6 treatment. The claimed "control circuitry" is performing tasks in the context of an "interactive television program guide" application. Those tasks implement generic functions like receiving user inputs

Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
			storage circuitry in accordance with the description and flow charts at Figures 1, 2, 6, 8-13, 17b, 18, 19b, 20b, 21, 27, 28, 29-31 and accompanying descriptions	described at 11:63-12:40 and shown in Figure 6; and Fig. 30, step 350, as described in 31:33-32:16 • Fig. 1, server 36, 56, service provider 50, user equipment, 18, 20, 22, as described in 5:44-7:38; and Fig. 2, set-top box 60, television 64, as described in 7:39-64, 8:46-56, and Fig 3, recording device 66, television 68, as described in 8:57-9:58; and Fig. 5, personal computer 98, as described in		and storing and displaying information. Contrary to Comcast's position, there is no indication that the claimed "control circuitry" is performing a specialized function that would require the disclosure of specialized programming or additional structure. For these reasons, it would be inappropriate to treat "circuitry" as a means-plus-function term and limit its scope only to disclosed, corresponding structures.

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
				10:56-11:14, and Fig. 29, step 334, as described in 28:66-29:14; and Fig. 30, step 358, as described in 32:27-60; and Fig. 31 step 378, as described in 34:38-51 • Fig. 1, server 36, 56, service provider 50, user equipment, 18, 20, 22, communications paths, as described in 5:44-7:38, 8:8-23; and Fig. 2, set-top box 60, as described in 7:39-8:23; and Fig. 3, recording		

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
				device 62, as described in 8:57-9:36; and Fig. 4, remote control 72, as described in 9:59-10:55; and Fig. 5, personal computer 98, input/output 104, as described in 10:56-11:3, and Fig. 6, control circuitry 106, input/output 108, user interface 118, as described in 11:63-12:40; and Fig. 29, steps 334, 336, 338, 340, 342, as described in 28:66-30:16; and Fig. 30, steps 358, 360, 362, 364, 366,		

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
				as described in 32:27-33:40; and Fig. 31, steps 378, 380, 382, 384, as described in 34:38-35:36 • Fig. 1, server 36, and/or server 56, and/or service provider 50, as described in 6:45-60; and/or a processor or processors, as described at 11:63-12:40 and shown in Figure 6; and Fig. 29, steps 336, 344, as described in 29:46-30:26; and Fig. 30, steps 360, 368, as described in 32:43-60, 33:31-51; and		

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Term No.	Claim (s)	Term	Rovi's Proposed Construction	Comcast's Proposed Construction	Adopted Construction	Rationale
				Fig. 31, steps 380, 386, as described in 34:52-35:2, 35:17-49		

CONFIDENTIAL CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served by hand upon the Commission Investigative Attorney, **John Shin, Esq.**, and the following parties as indicated, on **October 15, 2018**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
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☐ Other:_____

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