

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

ROVI GUIDES, INC.; ROVI TECHNOLOGIES  
CORP.; and VEVEO, INC.,

Plaintiffs,

-v-

COMCAST CORPORATION; COMCAST  
CABLE COMMUNICATIONS, LLC;  
COMCAST CABLE COMMUNICATIONS  
MANAGEMENT, LLC; COMCAST OF  
HOUSTON, LLC; COMCAST BUSINESS  
COMMUNICATIONS, LLC; COMCAST  
HOLDINGS CORPORATION; and COMCAST  
SHARED SERVICES, LLC,

Defendants.

16-CV-9278 (JPO)

CLAIM CONSTRUCTION  
OPINION AND ORDER

J. PAUL OETKEN, District Judge:

This is a patent infringement action brought by Plaintiff Rovi Guides, Inc. and its subsidiaries (together, “Rovi”) against the Comcast Defendants.<sup>1</sup> Currently pending before the Court are the parties’ memoranda on claim construction. (See Dkt. No. 283; Dkt. No. 288; Dkt. No. 293.) The Court held a *Markman* hearing on July 7, 2017, to determine the proper construction of the disputed terms in this case. (See Minute Entry, July 7, 2017.) Having considered the parties’ arguments and briefing on claim construction, the Court construes the disputed terms as set forth below.

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<sup>1</sup> The Comcast Defendants are Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast of Houston, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC (together, “Comcast”). On June 30, 2017, this Court granted Rovi’s motion to dismiss its claims against ARRIS Group, Inc. and its subsidiaries, Technicolor USA, Inc., and Technicolor Connected Home USA LLC. (Dkt. No. 302.)

## I. Background

There are six patents at issue in this case. They are U.S. Patent Nos. 8,713,595 (“the ’595 patent”), 9,172,987 (“the ’987 patent”), 8,433,696 (“the ’696 patent”), 7,895,218 (“the ’218 patent”), 8,122,034 (“the ’034 patent”), and 7,996,864 (“the ’864 patent”).<sup>2</sup> The parties dispute a total of twenty-nine of the claim terms that appear in these six patents. (*See* Dkt. No. 306.) The patents cover a number of different fields, including interactive program guides (“IPGs”), remote control, and content searching.

Rovi’s expert, Dr. Shamos, posits that a person of ordinary skill in the relevant art (“POSITA”) would have a bachelor’s degree in “electrical engineering, computer engineering, or computer science, and two to three years of experience relating to electronic content delivery, such as experience with design or technical analysis of cable or satellite television systems, set-top boxes, multimedia systems or electronic program guides, or any equivalent knowledge, training, and/or experience.” (Dkt. No. 283 at 1; Dkt. No. 283-7 ¶ 5 (“Shamos Decl.”).)

Comcast’s experts, Dr. Bederson and Dr. Kelly, also offer opinions regarding the level of skill in the art for the particular patents. For the ’864 patent, Dr. Bederson states that the relevant field of art is “television user interfaces,” and that a POSITA “at the time of the alleged invention of the ’864 patent would have been someone with at least a bachelor’s degree in computer science, electrical engineering, computer engineering, or a similar discipline, and at least two to three years of experience or familiarity with electronic program guides, television video signal processing, graphical user interfaces, and associated software.” (Dkt. No. 289 ¶ 14–15)

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<sup>2</sup> On July 28, 2017, Rovi requested that the Court dismiss, without prejudice, all claims related to U.S. Patent Nos. 6,725,281 and 8,755,666. (Dkt. No. 311.) That request is hereby granted.

(“Bederson Decl.”).) For the ’218 and ’034 patents, Dr. Kelly contends that the relevant field of art is “data search techniques,” and that a POSITA “at the time of the claimed inventions would have a minimum of: (i) a bachelor’s degree in computer science, computer engineering, applied mathematics, or a related field of study; and (ii) two or more years of industry experience relating to designing and implementing systems that utilize data search techniques. Additional graduate experience could substitute for professional experience, or significant experience in the field could substitute for formal education.” (Dkt. No. 290 ¶ 13–14 (“Kelly Decl.”).)

The Court does not perceive significant differences between these formulations and the parties did not dispute this matter in their briefs or at oral argument. Each of the parties’ experts believes that a person of skill in the art would have a bachelor’s degree and two or more years of industry experience. The Court therefore concludes that a POSITA for the six patents-in-suit 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.

## **II. Legal Standard**

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decisions in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc). Claim construction is an issue of law properly decided by the Court. *Markman*, 52 F.3d at 970–71. “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v.*

*Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). “[I]n all aspects of claim construction, ‘the name of the game is the claim.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)).

To determine the meaning of the claims, courts begin by considering the intrinsic evidence, the primary source for determining claim meaning. *Phillips*, 415 F.3d at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004) (collecting cases). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed below—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent and intrinsic evidence. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003). “There is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Massachusetts Inst. of Tech. v. Shire Pharm., Inc.*, 839 F.3d 1111, 1118 (Fed. Cir. 2016) (quoting *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (internal quotation marks omitted)).

There are “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term

either in the specification or during prosecution.”<sup>3</sup> *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (“[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal.”). The standards for finding lexicography or disavowal are “exacting.” *GE Lighting Solutions*, 750 F.3d at 1309.

As to lexicography, it is well settled that “patentees may choose their own descriptive terms as long as those terms adequately divulge a reasonably clear meaning to one of skill in the art.” *Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1375 (Fed. Cir. 1999). To act as his or her own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *GE Lighting Solutions*, 750 F.3d at 1309 (quoting *SciMed Life Sys. Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001)). Departing from the ordinary meaning of the claim terms requires the patentee to set forth his or her lexicography “with reasonable clarity, deliberateness, and precision.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998); *see also In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (“Although an inventor is indeed free to define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision.”). “Where an inventor chooses to be his own lexicographer and to give terms uncommon meanings, he must set out his uncommon

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<sup>3</sup> The Court notes that some cases have characterized other principles of claim construction as exceptions to the general rule as well. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002) (noting, for example, the statutory requirement that “a claim term will cover nothing more than the corresponding structure or step disclosed in the specification, as well as equivalents thereto, if the patentee phrased the claim in step- or means-plus-function format”).

definition in some manner within the patent disclosure so as to give one of ordinary skill in the art notice of the change.” *Id.* at 1480 (quoting *Intellicall, Inc., v. Phonometrics, Inc.*, 952 F.2d 1384, 1387–88 (Fed. Cir. 1992) (internal quotation marks omitted)). “Absent implied or explicit lexicography or disavowal,” the plain meaning of the claim terms governs. *Trustees of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1364 n.2 (Fed. Cir. 2016).

The Federal Circuit, in *Phillips*, rejected any claim construction approach that sacrificed the intrinsic record—including the specification—in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court disavowed the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms—through dictionaries or otherwise—before turning to the specification. *Phillips*, 415 F.3d at 1319–24. *Phillips* does not, however, preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to that of the intrinsic record. The *Phillips* court noted that, “[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. In such circumstances, general purpose dictionaries may be helpful.” *Id.* at 1314 (citation omitted).

The Federal Circuit did not impose any particular sequence of steps for a district court to follow when it considers disputed claim language. *Id.* at 1323–24. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant. *Id.* at 1324.

### III. Discussion

#### A. The '595 Patent Claim Terms

The '595 Patent, titled “Interactive Program Guide Systems and Processes,” “relates to television program guide systems and particularly to interactive television program guide systems and related processes that can automatically tune a television, or program a video cassette recorder (VCR), based on program selections made from program schedule information displayed on a television or other suitable video monitor.” ('595 patent col. 1 ll. 18–23.) Simply put, by way of this invention, one can use an IPG to control tuners, allowing a user to record multiple programs even if the programs are scheduled at the same time.

##### 1. “Tuner”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
tuner	'595 Patent Claims 1, 9, 13, 14, 17, 21, & 22	no construction is necessary, plain and ordinary meaning	an electronic circuit used to selectively receive RF signals in a desired frequency channel

Rovi argues that no construction is necessary for this term. In the alternative, Rovi urges the Court to adopt Comcast’s proposed construction for “tuner” in U.S. Patent No. 8,621,512 (“the '512 patent”), for which it argued at the United States International Trade Commission: “an electronic circuit used to selectively receive RF signals in a desired frequency channel *and convert them into audio and video signals.*” (Dkt. No. 283 at 3–5.)

Comcast argues that it is improper to import limitations from a different patent—the '512 patent—into the term “tuner” as used in the '595 patent. (Dkt. No. 288 at 5–6.) The '512 patent describes the “[t]uner outputs” as “connected to audio/video output.” ('512 patent col. 7 ll. 33–35.) Rovi’s proposal to add a requirement that the tuner “convert [RF signals] into audio and video signals” does not find similar support in the '595 patent, which describes “tuning circuitry”

that “processes the incoming signals in a conventional manner to extract the program schedule information, operational parameters, and software modules.” (’595 patent col. 7 ll. 20–23.)

In this case, Comcast is concerned that if the term is given no construction, Rovi will argue that modern technology in the accused products falls within the scope of the ’595 patent. In particular, some of the accused products utilize “full-band capture” technology, as opposed to capturing a particular signal out of a set of incoming signals. (Dkt. No. 288 at 5.)

Comcast’s construction is consistent with both Rovi’s own expert’s understanding and the specification’s description of the tuner. Rovi’s expert, Dr. Shamos, stated that “[a] tuner is an electronic circuit that enables a device to selectively receive a signal out of a selection of a plurality of signals.” (Shamos Decl. ¶ 7.) This comports with Comcast’s proposed construction. Moreover, the specification of the ’595 patent repeatedly describes the user making selections that “caus[e] the tuning circuitry . . . to tune to the channel.” (’595 patent col. 22 ll. 46–47; *see also id.* col. 4 ll. 37–41; col. 7 ll. 43–46; col. 19 ll. 56–60.)

The term “tuner” is not overly technical, but some explanation of the term may be helpful for the fact-finder. Comcast’s proposed construction is consistent with the terms plain and ordinary meaning, describes the function of a tuner as used in the specification, and is endorsed by Rovi’s expert. As such, the Court adopts Comcast’s proposed construction for “tuner”: “an electronic circuit used to selectively receive RF signals in a desired frequency channel.”



## 2. “Video Recorder”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
video recorder	’595 Patent Claims 1, 9, 13, 14, 17, 21, & 22	no construction is necessary, plain and ordinary meaning	video cassette recorder

Rovi argues that no construction is necessary for the term “video recorder.” (Dkt. No. 283 at 15–16.) While the specification of the ’595 patent discusses video recorders only in the context of “video *cassette* recorders,” Rovi argues that this is merely a preferred embodiment of the invention, which should not limit the claims. (Dkt. No. 293 at 1.)

Comcast contends that Rovi’s “plain and ordinary meaning” is an attempt to expand the scope of the claims to encompass modern technology not contemplated by the ’595 patent, including “digital video recording.” (Dkt. No. 288 at 4.)

Comcast also notes that the term “video recorder” does not appear anywhere in the specification of the ’595 patent. (*Id.* at 3.) In fact, the only device disclosed in the patent that is capable of recording video is a “video cassette recorder.” (*Id.*)

In support of its limiting construction, Comcast relies on *Regents of University of Minnesota v. AGA Medical Corp.*, where the Federal Circuit held that if “every single embodiment disclosed in the . . . patent’s drawings and its written description is made up of” a particular embodiment—here a VCR—and the patent describes the “invention” as having that embodiment, “this description limits the scope of the invention.” 717 F.3d 929, 936 (Fed. Cir. 2013). In that case, however, the Federal Circuit also held that “[t]he claim language fully support[ed]” the construction as described in the specification. *Id.* This is not the case here, where the claim term “video recorder”—an unambiguous term—does not support the limiting construction urged by Comcast.

Comcast has not met the high burden of demonstrating lexicography or estoppel to otherwise limit the scope of this term. The Federal Circuit “has expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Liebel–Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (collecting cases). Indeed, “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’” *Id.* (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002)).

The ’595 patent does not exclude or restrict the otherwise easily understood term “video recorder.” Accordingly, the Court affords this term its plain and ordinary meaning.

**3. “Interactive Television Program Guide” and “User Equipment Having an Interactive Program Guide Implemented Thereon”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
interactive television program guide	’595 Patent Claims 1, 9–17, 21, 23, & 24	guide 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 causes the display of a set of screen displays, at least one of them presenting schedule information for television programs, and at least one screen display being responsive to user input.
user equipment having an interactive television program guide implemented thereon	’595 Patent Claims 9	no construction is necessary, plain and ordinary meaning	equipment at a user site that stores and runs the interactive television program guide

There are two systems that are currently accused of infringement: the older, “Legacy”

system and the newer, “X1” system. (Dkt. No. 288 at 6.) The Legacy system runs its interactive program guide directly on the set-top box while the X1 system utilizes a distributed cloud server to store the guide software. (*Id.*) Comcast argues that Rovi is attempting to broaden the meaning of the claim terms to capture the X1 system.

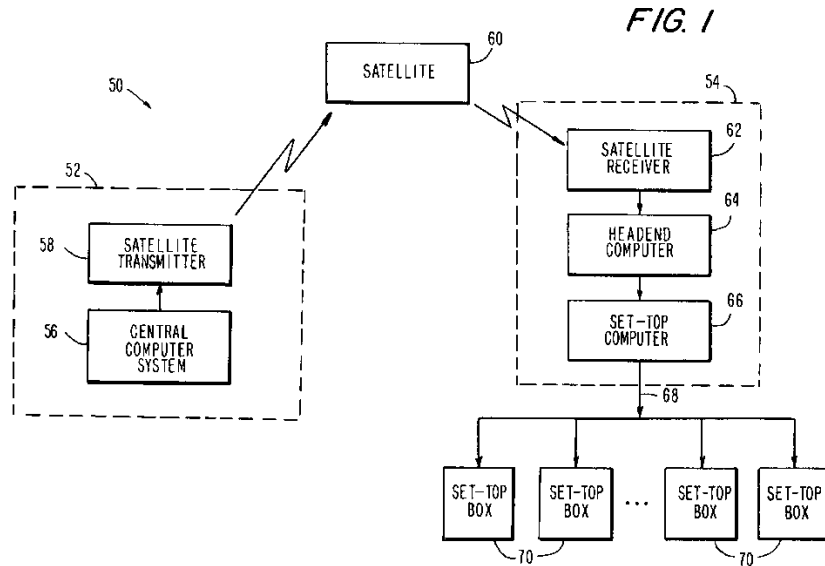
For the “interactive television program guide” term, Comcast indicates in its brief to this Court that it disputes only whether the term refers to a “guide” or “an application,” and otherwise agrees to the remainder of Rovi’s proposed construction. (Dkt. No. 288 at 7 n.5.)

Rovi disputes Comcast’s proposed construction to the extent that it (1) limits the guide to “an application,” as opposed to multiple applications;<sup>4</sup> and (2) limits the guide to run on “equipment at a user site.” (Dkt. No. 293 at 2.)

Comcast’s proposed construction, however, is consistent with the disclosures of the ’595 patent. Throughout, the ’595 patent treats the term “interactive television program guide” as an application that is implemented on a set-top box, which is located at the user site. For example, the Abstract of the ’595 patent explains that “the interactive program guide is preferably implemented using a microprocessor-controlled set-top box that is coupled to the viewer’s television set.” (’595 patent at Abstract.) Figure 1 of the patent, depicted below, goes on to describe “a system **50** which provides the interactive program guide of the present invention.” (*Id.* col. 5 ll. 64–65.)

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<sup>4</sup> At oral argument, counsel for Comcast noted that Rovi’s misgivings about “an application” being singular are unfounded, conceding that “‘application’ can refer to, you can have a distributed application, so you can have some software here and some software over there that work together as an application.” *See* Transcript of Oral Arg. at 96:9–11.



That system includes “a data center **52** and a headend telecasting center **54**,” which transmits a “set of program schedule information . . . on a cable network **68**” that is received by “[a] plurality of set-top boxes **70** coupled to the cable network **68** [to] receive the television program signals and the program schedule information.” (*Id.* col. 6 ll. 5–6, 46–55.) The ’595 patent refers to “a set-top box suitable for implementing the interactive program guide of the present invention.” (*Id.* col. 5 ll. 46–48.)

In this way, the ’595 patent contemplates a distributed system that provides the “interactive television program guide” to a set-top box, which then implements the “interactive television program guide.” This is consistent with Comcast’s description of the “interactive television program guide” as “an application” and with Comcast’s description of “user equipment” as referring to “equipment at a user site,” (*i.e.*, on the set-top box coupled to the viewer’s television set). The ’595 patent does not disclose an “interactive television program guide” that is stored or run at a location other than the user site, such as on remote servers or elsewhere.

Rovi’s expert opines that the specification of the ’595 patent “make[s] it clear that the

interactive television program guide . . . can be distributed applications that run on, or are implemented on, different items of equipment that can be geographically distant.” (Shamos Decl. ¶ 15.) But neither Rovi nor Dr. Shamos specifically points to where in the ’595 patent there is any support for finding that the “interactive television program guide” is a distributed application run on geographically distant units. Instead, Dr. Shamos cites to a number of passages in the specification of the ’595 patent that generally refer to the interactive television program guide, but do not otherwise support his position that the application runs on multiple, geographically distant units. (*See id.*) Moreover, Dr. Shamos himself refers to the “guide” as an “application[,]” which supports Comcast’s proposed construction of the “guide” as “an application.” (*Id.*)

In further support of Comcast’s construction, Claim 9 describes the “user equipment” as “comprising a display device, a first tuner, a second tuner, a memory, a set-top box, and a video recorder.” (’595 patent col. 31 ll. 51–53.) All of these items are present at the user site. (*See id.* col. 7 l. 15–col. 8 l. 46; *id.* at Figure 2; *id.* col. 4 ll. 14–17 (“The interactive program guide is implemented preferably using a microprocessor-controlled set-top box that is coupled to the viewer’s television set.”).)

Comcast’s proposed constructions are consistent with the specification and will clarify the nature of the “interactive television program guide” contemplated by the patent to the fact finder. *See United Video Properties, Inc. v. Amazon.com, Inc.*, No. 11 Civ. 003, 2012 WL 2370318, at \*13 (D. Del. June 22, 2012), *aff’d*, 561 F. App’x 914 (Fed. Cir. 2014) (construing “interactive program guide” as “an application that produces interactive display screens that include television program schedules and channel information”).

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.”

**4. “Receiv[ing] . . . Program Schedule Information”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
receiv[ing] . . . program schedule information	’595 Patent Claims 1, 9, & 17	no construction is necessary, plain and ordinary meaning	receiv[ing] program schedule information in the set-top box

Rovi argues that it is improper to import the term “in the set-top box” into the claim, which (1) alters its plain meaning and (2) creates antecedent basis issues in reading the claim term if implemented. (Dkt. No. 293 at 3.)

Comcast argues that the claim term “receiv[ing] . . . program schedule information” should be construed as limited to receipt of such information only “in the set-top box,” as opposed to in a remote server or other remote device. (*See* Dkt. No. 288 at 8.)

The specification of the ’595 patent explains that “[a] plurality of set-top boxes **70** coupled to the cable network **68** receive the television program signals and the program schedule information.” (’595 patent col. 6 ll. 53–55; *see also id.* col. 4 ll. 17–19 (“The set-top box receives program schedule information and software from a headend telecasting center.”).) And Comcast notes that the examiner relied on the limitation that the “receiver receives” certain information to overcome a particular prior art reference. (Dkt. No. 288 at 8 (citing Dkt. No. 291-12 at 3.)

Neither Comcast’s citation to the specification to show lexicography nor its reference to the prosecution history to show disavowal meets the high standard required for the Court to deviate from the plain and ordinary meaning for this term by adding the proposed limitation. *See Thorner*, 669 F.3d at 1365–66 (describing the standards for lexicography and disavowal as “exacting”). As such, the Court adopts the plain and ordinary meaning for the term “receiv[ing] . . . program schedule information.”

**B. The ’987 Patent Claim Terms**

The ’987 patent, titled “Methods and Systems for Updating Functionality of a Set-Top Box Using Markup Language,” covers an invention in which markup language documents are used to update and modify the functionality of a program guide.

**1. “Markup Language”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
markup language	’987 Patent Claims 1, 8, 9, & 16	computer language for specifying the format of a file for printing or display	system for marking or tagging a document so that the document arranges user display screen layout and styling and indicates functionality

Comcast’s proposed construction is from the specification of the ’987 patent, which states that “[t]he markup language used may be any suitable markup language *or system of marking up, or tagging, a document (e.g., text file) so that the document indicates user display screen layout and styling and program guide functionality.*” (’987 patent col. 2 ll. 30–34 (emphasis added).) Comcast describes this as “lexicography.” (Dkt. No. 288 at 19–20.) Comcast disagrees with Rovi’s proposed construction because it does not include the concept of “tagging” or “marking up.” (*Id.* at 20–21.)

Rovi argues that the addition of the word “system” is inappropriate since (1) “system” has a special definition in patent law—indicating an apparatus claim (Dkt. No. 293 at 3); and (2) a “markup language” is a language, not a system (Dkt. No. 283 at 14).

Indeed, the passage that Comcast relies upon describes the markup language as a “markup language *or* system of marking up.” (’987 patent col. 2 ll. 30–31 (emphasis added).) Even assuming that this passage constitutes lexicography, Comcast’s definition impermissibly reads out the “markup language” aspect in favor of the “system of marking” aspect. But this passage does not constitute lexicography because Comcast has failed to demonstrate that the patentee, “with reasonable clarity, deliberateness, and precision,” departed from the ordinary meaning of the claim term. *Paulsen*, 30 F.3d at 1480.

Rovi’s expert relies on the 2002 edition of the Microsoft Computer Dictionary to argue that the “usual definition” of “markup language” is a “set of codes in a text file that instructs a computer how to format the file on a printer or video display or how to index and link its contents.” (Shamos Decl. ¶ 13.) This is more consistent with Rovi’s proposed construction than Comcast’s.

Rovi’s definition is consistent with the plain meaning, the specification, and the dictionary definition relied upon by its own expert. As such, the Court construes “markup language” as “computer language for specifying the format of a file for printing or display.”



**2. “Markup Language Document” and “Dynamic Hyper Text Markup Language [“DHTML”] Document”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
markup language document	’987 Patent Claims 1, 8, 9, & 16	No construction necessary, plain and ordinary meaning	self-contained file tagged using markup language code
Dynamic Hyper Text Markup Language document	’987 Patent Claims 8 & 16	computer file containing Dynamic Hypertext Markup Language	self-contained file tagged using Dynamic Hyper Text Markup Language code

The crux of the dispute over this term is Comcast’s inclusion of the “self-contained” limitation in its proposed construction. Rovi relies upon a dictionary definition of “Dynamic Hyper Text Markup Language”: “Of all the Web-related technologies, DHTML is perhaps the most poorly named. A reference to ‘the dynamic hypertext markup language’ leads one to think of a self-contained language, perhaps a big brother of HTML, used to enable dynamic interactive effects. But DHTML is not a self-contained language.” (Dkt. No. 283-1 at 4.)

Comcast, in turn, relies on a dictionary definition of “document”: “Any self-contained piece of work created with an application program and, if saved on disk, given a unique filename by which it can be retrieved.” (Dkt. No. 291-21 at 4.)

The incorporation of the “self-contained” limitation from Comcast’s definition of “document” into the construction of “Dynamic Hyper Text Markup Language document” would create confusion. The language in question is not self-contained. Referring to it as such simply because it is used in a “document,” which is self-contained in a different respect, will not assist the trier of fact and has no support in the intrinsic evidence.

As such, the Court finds that no construction is required for “markup language document” and construes “Dynamic Hyper Text Markup Language document” as a “computer file containing Dynamic Hypertext Markup Language.”

### 3. “Preprogrammed on the Set-Top Box”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
preprogrammed on the set-top box	’987 Patent Claims 1 & 9	programmed on the set top box prior to receipt of a markup language document	written in the code on the set-top box prior to performing any of the claimed steps

With respect to this term, the parties dispute whether the preprogramming must happen (a) prior to the receipt of a markup language document, as Rovi contends, or (b) prior to performing any of the claimed steps, as Comcast contends.

Claim 1 of the ’987 patent describes a “method” that “generat[es] for display . . . a display item having a first program function,” where that first program function is “preprogrammed on the set-top box.” (’987 patent col. 10 ll. 60–65.) The method continues when the set-top box “receiv[es] . . . a markup language document,” “interpret[s] the markup language document”—which “assigns a second program function to the display item”—and then “update[es] the set-top box based on the markup language document such that the display item has the second program function.” (*Id.* col. 10 l. 66–col. 11 l. 17.) Finally, the “display item having the second program function” is “generat[ed] for display.” (*Id.* col. 11 ll. 8–9.)

Comcast argues that the display item’s “first program function” must be programmed prior to *any* other step of the claim, including before it is generated for display. (Dkt. No. 288 at 22 (citing *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003) (reciting a test to

determine “if the steps of a method claim that do not otherwise recite an order, must nonetheless be performed in the order in which they are written”).)

Rovi argues that Comcast’s proposed temporal limitation is neither required by the claims nor disclosed in the specification. (Dkt. No. 283 at 12–13.) All that is required by the claim, according to Rovi, is that the display item’s “first program function” be programmed prior to the receipt of a markup language document because that is how the claim differentiates the display item’s “first program function” from its “second program function.” (Dkt. No. 283 at 13.)

Moreover, Rovi argues, Comcast’s proposed construction is framed in the context of claim 1, a method claim, but claim 9 of the ’987 patent also contains the disputed term and is an apparatus claim. Comcast’s proposed construction would risk the validity of Claim 9 by creating one claim with two categories of invention: a system and method. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005); *Tate Access Floors v. Interface Architectural Res.*, 279 F.3d 1357, 1367 (Fed. Cir. 2002) (“[C]laim language should generally be construed to preserve validity, *if possible*.”).

Claim 1 indicates that a “display item” with a “first program function” is “preprogrammed on a set-top box.” (’987 patent col. 10 ll. 60–65.) As a matter of logic, this should occur before it is generated for display, as is consistent with Comcast’s proposed construction. However, Comcast has not demonstrated that the claim language requires that the steps “*must* be performed in the order written.” *Altiris*, 318 F.3d at 1369. Nor has Comcast convinced the Court that its construction would not risk the validity of claim 9, as Rovi argues. In any event, neither party’s proposed construction is required by the claims or the specification. The meaning of “preprogrammed on the set-top box” is unambiguous and requires no construction. As such, the Court affords the term its plain and ordinary meaning.

#### 4. “Program Function”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
program function	’987 Patent Claims 1, 3, 9, & 11	a function of a program guide	program guide functionality (i.e., not screen layouts)

The parties mainly dispute Comcast’s inclusion of the limitation that “program function” does not include “screen layouts.”

Comcast points to the specification’s discussion of “screen layout” as separate from “function” or “functionality.” (Dkt. No. 288 at 23.) For example, the ’987 patent discusses “[d]isplay screen style and layout and program guide functionality” as two separate things that “may be set initially for the program guide.” (’987 patent col. 7 ll. 14–15.)

Rovi points out that Comcast’s proposed additional negative limitation is not found or used in the claims. (Dkt. No. 293 at 4.) Though Rovi proposes a construction for this term, it also argues that the term need not be construed. (*Id.*)

This is a straightforward term. Comcast has not demonstrated that the distinction on which it relies rises to the level of lexicography sufficient to justify its proposed construction, which imports a limitation from the specification into the claims. As such, the Court provides no construction for the term.

#### C. The ’696 Patent, ’218 Patent, & ’034 Patent Claim Terms

These three patents are all addressed to improvements in “incremental search,” which involves updating search results as a user “incrementally” enters additional search inputs and ranking the results by relevance.

The ’696 patent, titled “Method and System for Processing Ambiguous, Multiterm Search Queries,” relates to searches for video/audio content items in which the user’s search

query is input using a device having a text input interface with overloaded keys. An overloaded key is a key with multiple alphabetical and/or numerical symbols, such as a touch-tone phone where the “2” key is associated with the number “2” and the letters “A,” “B,” and “C.”

The ’218 patent, titled “Method and System for Performing Searches for Television Content Using Reduced Text Input,” covers certain uses of incremental searches for television content using prefixes of descriptive words. The ’218 patent claims identifying and selecting a television content item from a relatively large set of television content items using reduced text input. For example, a user could search for the actor “Brad Pitt” by entering prefixes for each word, such as “B P,” “BR P,” “B PI,” and so on.

The ’034 patent, titled “Method and System for Incremental Search With Reduced Text Entry Where the Relevance of Results is a Dynamically Computed Function of User Input Search String Character Count,” is directed to improving the dynamic retrieval of search results for each character entered, which the patent describes as important for increasing the likelihood of a user’s arriving at desired results without having to enter the full search text.

### 1. The “Items” Terms

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
television content item	’218 Patent Claims 1 & 19 ’696 Patent Claims 11 & 25	no construction is necessary, plain and ordinary meaning	video/audio content that can be selected by a television viewer
content items	’696 Patent Claims 1 & 15	units of video/audio content	video/audio content that can be selected by a viewer

First, there is no limitation in the claims or the specification that supports Comcast’s proposed limitation that “content items” be “selected by a viewer.”

Second, Comcast indicates that it does not object to Rovi's proposed construction, so long as "content item" excludes reference to any "descriptor," such as a title.

Comcast notes that in Rovi's preliminary response to a petition for *inter partes* review ("IPR") of the '696 patent, Rovi indicated that its construction of "content items" excludes "descriptors relating to the content item (such as a title) [from] the definition of 'content item' itself." (Dkt. No. 288 at 26–27 (quoting Dkt. No. 291-24 at 10, 12).) Comcast argues that Rovi's proposed construction in its preliminary response constitutes a disclaimer that requires Rovi to put forth a narrower construction of the term than was put forth during the *inter partes* review proceedings. (*Id.* (citing *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353 (Fed. Cir. 2017) (affirming prosecution disclaimer based on statements in *inter partes* preliminary response)).) As such, Comcast does not object to Rovi's construction of "content items" as "units of video/audio content" so long as this understanding excludes descriptors, such as the title. And Comcast similarly does not object to Rovi's proposal of "no construction" for "television content item," so long as it is subject to the understanding that it does not include "descriptors." (Dkt. No. 288 at 27.)

At oral argument, Rovi argued that Comcast was asking the Court "to attribute to Rovi, based on the IPR proceeding, a position that Rovi hasn't taken." Transcript of Oral Arg. at 29:2–4. A review of the response shows that Rovi did not evince a "clear and unmistakable surrender of claim scope," which is necessary to constitute disclaimer. *Aylus Networks*, 856 F.3d at 1362. While Rovi emphasized the distinction between "content items" and their "descriptors," they explicitly maintained that "a descriptor may relate to a content item, but is not the content item itself." (Dkt. No. 291-24 at 12.)

The nature of this relationship is important to understanding the claim terms at issue. In context, the claims discuss “selecting and presenting” “content items.” (*See, e.g.*, ’218 patent col. 10 ll. 15–17.) The specification notes that “[t]he system identifies a group of one or more television content items from the set of available television content items having descriptors matching the search entry.” (’218 patent col. 4 ll. 1–3.) “The names,” *i.e.* titles, are then “displayed” so that “[t]he viewer can then select the desired content item from the group displayed.” (*Id.* col. 4 ll. 3–7.) A construction of the term “content item” that categorically excludes their related “descriptors” does not make sense in the context of the claimed invention, which explicitly discusses selecting content items based on their related descriptors.

Accordingly, the Court construes “content items” as “units of video/audio content” and provides no construction for “television content items.”

## 2. “Prefixes”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
prefixes	’034 Patent Claims 1 & 16	no construction is necessary, plain and ordinary meaning	variable length strings containing characters of a word running from the first character of the word

Rovi asks for no construction of the term “prefix,” but nevertheless refers the Court to Random House Webster’s Unabridged Dictionary, which defines “prefix” as “[a]n affix placed before a base or another prefix, as un- in unkind and re- in unrewarding.” (Dkt. No. 283-5.) Rovi also argues that a construction of “prefix” that could include the entire word—as in Comcast’s construction—would render the invention inoperable by conflating “prefixes and “terms,” which are otherwise distinct. (Dkt. No. 283 at 26–27.)

Comcast notes that Rovi’s proposed dictionary definition is inconsistent with the specification, in that the specification does not require a “prefix” to be an “affix.” The

specification notes that “[a] prefix substring of a word in a name captures information from the word and can be a variable length string that contains fewer than all the characters making up the word.” (’034 patent col. 4 ll. 49–52.) In this way, “unk” is a prefix for “unkind,” even if it is not so in the dictionary definition provided by Rovi. Comcast, instead, points to the definition of “prefix” from a textbook entitled “Compilers.” (Dkt. No. 291-26 at 119.) That text identifies “ban” and “banana” as a prefix of “banana.” (*Id.*)

Neither the claims nor the specification sufficiently resolve the parties’ dispute as to the permissible length of a “prefix” as used in the invention. Comcast’s external evidence—the “Compilers” textbook—provides a more trustworthy and consistent definition of the term. Moreover, Comcast’s proposed construction of “prefix” does not render the invention inoperable by conflating “prefix” with “term” since “prefix” is broader than “term”: all terms are prefixes, but not all prefixes are terms.

As such, the Court construes “prefixes” as “variable length strings containing characters of a word running from the first character of the word.”

### 3. “Term”

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
term	’034 Patent Claims 1, 4, 6, & 19	no construction is necessary, plain and ordinary meaning	one or more ordered or unordered words that are part of the title, keyword, or any other portion of the meta-content of an item

Rovi argues that no construction is necessary for the term “term,” and that Comcast’s inclusion of a list of examples is unnecessary and likely to confuse the fact-finder.

Comcast argues that the specification is clear about the definition of the word “term.” Indeed, the ’034 Patent expressly notes: “[T]erm (i.e., an individual word or phrase that is a part



of the title, keyword or any other portion of the meta-content) . . . .” (’034 patent col. 2 ll. 65–67.) It goes on to note that “[a]s used herein, a ‘term’ is a set of one or more ordered or unordered words.” (*Id.* col. 6 ll. 59–60.)

“In a specification, a patentee’s ‘use of “*i.e.*” signals an intent to define the word to which it refers.” *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1200 (Fed. Cir. 2013) (quoting *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009)). And while there are exceptions to this general rule, *see SkinMedica*, 727 F.3d at 1201–02, Rovi does not argue that they apply, nor does the Court conclude that they do.

Accordingly, the Court construes “term” as “one or more ordered or unordered words that are part of the title, keyword, or any other portion of the meta-content of an item.”

#### 4. “Relatively Large Set of [Selectable] Television Content Items”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
relatively large set of selectable television content items / relatively large set of television content items	’218 Patent Claim 1 & 19	at least 1,500 selectable television content items	Indefinite

Comcast argues that the phrase “relatively large” does not provide objective boundaries sufficient to inform a POSITA about the scope of the claims, rendering the claim term indefinite. (Dkt. No. 288 at 30–32.)

Section 112 requires that a patent specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112(b). The Supreme Court has read this provision to require that “a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig*

*Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). Indefiniteness must be proven by clear and convincing evidence. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1345 (Fed. Cir. 2015).

“[C]laims involving terms of degree are [not] inherently indefinite.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). “[A]bsolute precision is unattainable” when drafting patent claims. *Nautilus*, 134 S.Ct. at 2129. “Thus, ‘a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.’” *Sonix Tech.*, 844 F.3d at 1377 (quoting *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1384 (Fed. Cir. 2005)).

Here, the term “relatively large” is a term of degree. Whether such a term is indefinite depends on whether the intrinsic evidence provides sufficient guidance as to the scope of the claim. Compare *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010) (holding claim term “not interfering substantially” did not render a claim indefinite where the intrinsic evidence included, among other thing, examples of noninterfering structures and criteria for their selection), with *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1348–50 (Fed. Cir. 2005) (holding claim term “aesthetically pleasing” rendered claim indefinite where the specification “provide[d] no guidance to a person making aesthetic choices,” rendering the claim “completely dependent on a person’s subjective opinion”).

Arguing against a holding that the term “relatively large” is indefinite, Rovi relies on certain examples from the specification. Comcast argues that the relied-upon examples are inapposite.

First, the specification does not use the term “relatively large.” However, the specification of the ’218 Patent does describe a study of searches performed on a set of 1,500

restaurants in which “98-99% of the restaurants were listed within a display list of top 5 restaurants with the entry of 4 characters, where 2 characters were taken from the first word and two from the next.” (’218 patent col. 9 ll. 21–24.) Simply put, this study describes a search through a database of 1,500 items using 4 characters, where 2 characters are from a first search word and 2 characters are from a second search word, resulting in 98-99% of the restaurants being listed in the search results. This is the smallest database discussed in the ’218 patent, which also describes a database of “only 150,000 items.” (*Id.* col. 9 ll. 11–19.)

These examples do not give meaning to the phrase “relatively large set of selectable television content items.” They are provided as examples in a discussion about the invention’s treatment of “entity and term space complexity” in designing search mechanisms. (*Id.* col. 8 ll. 64–67.) The specification teaches that it may be “useful to appropriately partition the space and have multiple distinct computing engines to serve requests.” (*Id.* col. 9 ll. 2–4.) This is accomplished by, for example, breaking down a movie database into its component genres or breaking down a phone book search space into its component cities. (*Id.* col. 9 ll. 4–8.) The patent then provides three example database searches: a 150,000 item database; a 1,500 item database; and a 58,000 item database. (*Id.* col. 9 ll. 11–31.) For each, the patent discusses how many characters are required to achieve a list of results that is sufficiently accurate. (*See id.* col. 9 ll. 9–11 (“[T]he number of characters to be entered may have to be increased to keep the hash collision count within the tolerable limit of scrolling.”).)

Rovi argues that the examples are provided to “show[] the benefits of searching within a relatively large set of items (1,500 restaurant names) using a limited number of characters from more than one word.” (Dkt. No. 293 at 9.) Rovi’s expert opines that the example with 1,500 items would inform a POSITA that such a database is “relatively large” within the context of the

patent. (Dkt. No. 283-8 ¶ 9.) But Comcast’s expert disagrees, stating that the examples are of arbitrary sizes and pointing out that the specification does not discuss whether the sizes are large or small. (Dkt. No. 290 ¶ 19.)

In *Sonix*, the Federal Circuit reversed a finding of indefiniteness as to the term “visually negligible.” First, it determined whether the claim language made the scope of the term “unmistakably” clear. 844 F.3d at 1378. Here, the claim terms provide no guidance as to the meaning of the term “relatively large.” Second, the *Sonix* court determined whether the term was “purely subjective”—such as the term “aesthetically pleasing”—or whether there exists an “objective baseline through which to interpret the claims.” *Id.* Whether a database is “relatively large” is not a purely subjective inquiry; rather, to determine if a database is “relatively large,” all one needs is a reference point to compare to. Jupiter is relatively large compared to Earth but relatively small compared to the Sun.

Turning to the written description, which is “key to determining whether a term of degree is indefinite,” *id.*, there is no reference point provided that would allow a POSITA to determine the scope of the term “relatively large set of selectable television content items.” There is no indication as to whether the disclosed databases—which are 1,500 to 150,000 units in size—are small, large, or average. Moreover, the parties’ experts disagree about what a relatively large database is. Rovi’s expert states that a database of 7,000 items would be considered “relatively large” (Dkt. No. 283-7 ¶ 10), while Comcast’s expert notes that such databases at the time of the invention could reach upwards of eight billion (Dkt. No. 290 ¶ 20). In any event, Rovi argues that reference to databases not disclosed in the ’218 patent specification are “irrelevant.” (Dkt. No. 293 at 9.)

Accordingly, the Court finds by clear and convincing evidence that, while the term “relatively large set of selectable television content items” is not a purely subjective term, the written description does not provide sufficient support to inform with reasonable certainty those skilled in the art of the scope of the invention. Accordingly, the Court hold that claims 1 and 19 of the ’218 patent are invalid as indefinite.<sup>5</sup>

**5. “The Second Overloaded Key Forming a String with the First Overloaded Key”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
the second overloaded key forming a string with the first overloaded key	’696 Patent Claims 1 & 15	no construction is necessary, plain and ordinary meaning	the second overloaded key forming with the first overloaded key a prefix substring of each of at least two words

The crux of the parties’ dispute as to this term is whether the “string” formed when combining the first and second overloaded key must have, at least, two words.

Comcast points to various parts of the patent that, it argues, require that any search term be at least two words. (Dkt. No. 288 at 32–34.) First, in describing the “field of invention” the patent states that “[t]he present invention generally relates to . . . methods and systems for processing ambiguous, reduced text, *multi-term* search queries.” (’696 patent col. 1 ll. 27–31 (emphasis added).) This is strong evidence that the patent is limited to multi-term search queries, as opposed to single-term queries. *See Regents of Univ. of Minnesota*, 717 F.3d at 936 (“When a patent thus describes the features of the ‘present invention’ as a whole, this description

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<sup>5</sup> This moots the parties’ dispute over the construction of the claim terms “descriptive term” and “descriptor prefix string / descriptor prefix,” which appear only in claims 1 and 19 of the ’218 patent.

limits the scope of the invention.”) (quoting *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007)).

Second, the patent’s abstract explains that “[t]he search query is a prefix substring of each of at least two words relating to the desired item,” and this description is also found in the summary of invention and the specification. (*Id.* at Abstract; *see also id.* col. 2 ll. 14–15; *id.* col. 3 ll. 14–16.) And the patent’s title is “Method and System for Processing Ambiguous, *Multiterm* Search Queries.” (*Id.* col. 1 ll. 1–3 (emphasis added); *see also id.* Figure 6 (disclosing multiple term prefix queries).)

Comcast argues that “every single example of a search query in the specification describes entry of a prefix substring of at least two words.” (Dkt. No. 288 at 33.) Rovi disagrees, relying on the specification’s description of Figure 4. There, the patentee describes a search with one word—“NBA.” (Dkt. No. 283 at 14 (citing ’696 patent col. 5 ll. 22–25.)) But “NBA” is not a single word prefix—it constitutes three single letter prefixes for the term “National Basketball Association.” Rovi also points to a discussion as to how the system orders search results based on the “type of query input,” which includes “single term prefixes.” (*Id.* (citing ’696 patent col. 5 ll. 50–55.)) But this disclosure is not inconsistent with the patent’s otherwise clear requirement that the search query comprise a prefix with two or more words. That is, although the “ordering criteria” can favor results when an input matches a “single term prefix,” the patent is directed to, and only discloses, processing “multi-term search queries” where “[t]he search query comprises a prefix substring of each of at least two words relating to the desired item.” (’696 patent col. 1 ll. 27–31; col. 3 ll. 14–16.)

And while dependent claims 5, 6, 19, and 20 refer to “entry of a plurality of overloaded keys corresponding to one or more words in an [ordered/unordered] format” (*Id.* col. 8 ll. 35–40;

col. 9 ll. 45–50), these claims are intended to distinguish between “ordered” and “unordered.” Moreover, claim differentiation is a presumption that may be rebutted. *See, e.g., Regents of Univ. of Cal. v. Dakocytomation Cal., Inc.*, 517 F.3d 1364, 1375 (Fed. Cir. 2008) (“[T]he presumption created by the doctrine of claim differentiation is ‘not a hard and fast rule and will be overcome by a contrary construction dictated by the written description or prosecution history.’”) (quoting *Seachange Int’l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005)).

In sum, the ’696 patent specification, “the single best guide to the meaning of a disputed term,” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996), consistently describes “a prefix substring of each of at least two words,” even going so far as to describe “the present invention” as related to “multi-term search queries.” *See Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006) (holding that when a patentee uses the phrases “‘this invention’ or ‘the present invention’ . . . the public is entitled to take the patentee at his word”).

Accordingly, the Court construes “the second overloaded key forming a string with the first overloaded key” term as “the second overloaded key forming with the first overloaded key a prefix substring of each of at least two words.”

#### **6. “Subspace Categories” and “Relevance Bias Value”**

Claims 1 and 16 of the ’034 patent require “the terms associated with the items being organized into searchable subspace categories, each subspace category having a relevance bias value.” (’034 patent col. 10 ll. 43–46; col. 12 ll. 22–24.)

**i. “Subspace Categories”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
subspace categories	’034 Patent Claims 1 & 16	categories of subspace terms	categories of terms, such as TV channel terms, TV show terms, TV cast terms, movie name terms, and movie cast terms

Though Rovi proposes a construction for this term, it argues in its reply that the term “requires no construction because it has a plain and ordinary meaning.” (Dkt. No. 293 at 11.)

Comcast’s non-exhaustive list of examples of “categories of terms” is taken from the specification, specifically the disclosure of Figure 7. (Dkt. No. 288 at 34.) But to the extent that Comcast’s proposed construction alters the plain and ordinary meaning of the term, it must demonstrate lexicography or disavowal. It argues neither. Instead, it appears that Comcast seeks merely to introduce a construction that may aid the trier of fact.

Where, as here, the term has a plain and ordinary meaning that is readily apparent, the Court need not provide a construction. As such, the Court affords “subspace categories” its plain and ordinary meaning.

**ii. “Relevance Bias Value”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
relevance bias value	’034 Patent Claims 1 & 16	value based on the preference of one subspace relative to one or more of the other subspaces	a subspace-specific value that causes certain subspace results to have a higher relevance than other subspaces

The specification notes that “the biasing of one subspace over another refers to the relative preferential position of subspaces by boosting or suppression.” (’034 patent col. 8 ll. 30–32.) The “bias *causes* certain subspace results to have a higher relevance than other subspaces”



(*id.* col. 7 ll. 36–37 (emphasis added)), but Rovi’s definition more accurately describes what the term *is*, as opposed to its effect.

The Court, therefore, construes “relevance bias value” as “value based on the preference of one subspace relative to one or more of the other subspaces.”

**E. ’864 Patent Claim Terms**

The ’864 patent, titled “Method and Apparatus for Displaying Television Program and Related Text,” covers a method and system for displaying an electronic program guide. It creates a method and system through which a television viewer can continue to watch a program while also scrolling through a program listing to view other available programs. To accomplish this, the ’864 patent is directed to dividing the television screen into three areas: program listings, program description, and the currently broadcast program.

**1. “Display[ing] of Television Program Listings” and “Display[ing] a Detailed Program Description”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
displaying / display of a plurality of television program listings	’864 Patent Claims 1, 6, 10, & 16	no construction necessary, plain and ordinary meaning	displaying / display of the plurality of television program listings such that the textual information is arranged on the screen so none of it is covered by the television program
displaying / display of . . . a detailed program description	’864 Patent Claims 1, 6, 10, & 16	<i>See</i> construction of “detailed program description”; otherwise, no construction necessary, plain and ordinary meaning	displaying / display of the detailed program description such that the textual information is arranged on the screen so none of it is covered by the television program

The parties dispute whether the term “display of a . . . program” in the claims of the ’864 patent requires that the program being displayed not overlap with the textual information being displayed. The plain and ordinary meaning of the term “display” does not limit the term to non-

overlapping instances. *See Phillips*, 415 F.3d at 1312–13; *Alloc*, 342 F.3d at 1368. And in patent law, “[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Shire Pharm.*, 839 F.3d at 1118 (quoting *Aventis Pharm.*, 715 F.3d at 1373 (Fed. Cir. 2013) (internal quotation marks omitted)).

Comcast’s primary argument for construing the term to include this limitation comes from the patent’s specification, which teaches in the Summary of the Invention:

*According to the invention*, the moving images of a television program are displayed in a PIP window on the screen of a television monitor and textual information related to the television program is displayed in the background on the screen. *Preferably*, the audio portion of the television program displayed in the PIP window is also reproduced by the sound system of the television monitor. *The textual information is arranged on the screen so none of it is covered by the moving images.*

(’864 patent col. 2 ll. 6–14 (emphases added).) Comcast argues that the last sentence limits the claims as it is in a paragraph purporting to describe “the invention.” (*See* Dkt. No. 288 at 35–36 (citing *Regents of Univ. of Minnesota*, 717 F.3d at 936).) Rovi points to the second sentence of the above-quoted passage, which describes a preferred embodiment, to argue that the relied-upon language does not limit the claims or describe the invention as a whole. (*See* Dkt. No. 293 at 15–16.)

The patentee did not deliberately act as his own lexicographer in this section. This disclosure notes that, “[a]ccording to the invention,” the program is displayed in a picture-in-picture (“PIP”) window on the screen “and textual information related to the television program is displayed in the background.” (’864 patent col. 2 ll. 6–14.) This does not evidence an intention by the patentee to disclaim embodiments in which the text is partially covered by the program image, as Comcast argues. The patentee then describe a preferred embodiment, in which the audio of the program continues to play and *then* notes that the textual information “is

arranged on the screen so none of it is covered by the moving image.” (*Id.*) Had the patentee clearly intended to limit the invention, as Comcast argues, he could have switched the second and third sentences or otherwise conveyed a clear intent to do so. Given the high standard to demonstrate lexicography or disavowal, *see Thorner*, 669 F.3d at 1365–66, the Court does not construe this as a deviation from the plain and ordinary meaning of the claim term.

Comcast also relies on other passages in the specification, including the Abstract, which describe the text as uncovered by the image. (*See, e.g.*, ’864 patent at Abstract (“All the text of the background information lies outside the PIP window.”); *id.* col. 6 ll. 25–26 (“PIP window 42 does not cover up any of the information of background area 40”). Yet at oral argument, counsel for Comcast conceded that “it’s not entirely clear” whether the embodiment of the invention pictured in Figure 9 of the patent discloses video on top of text or vice versa. Oral Arg. at 114:22–115:1.

Accordingly, the Court affords “displaying / display of a plurality of television program listings” its plain and ordinary meaning.

## 2. “Detailed Program Description”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
detailed program description	’864 Patent Claims 1, 6, 9, 10, & 16	description of a program including information in addition to the program title	Indefinite

Comcast argues that the term “detailed program description” is indefinite.

“Definiteness requires clarity, though ‘absolute precision is unattainable.’” *Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275, 1290 (Fed. Cir. 2017) (quoting *Nautilus*, 134 S. Ct. at 2129). “When a ‘word of degree’ is used, the court must determine whether the patent

provides ‘some standard for measuring that degree.’” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quoting *Enzo Biochem*, 599 F.3d at 1332). As described earlier, in *Sonix Technology*, for example, the Federal Circuit found the phrase “visually negligible” definite based on examples from the specification and prosecution history. 844 F.3d at 1379–80.

The term “detailed” is a word of degree. The term is found only in the claims of the ’864 patent, while the written description discloses a “brief program description.” (*See, e.g.*, ’864 patent col. 5 ll. 39–40.) Comcast posits that “[t]he patent cannot ‘inform, with reasonable certainty’ the meaning of ‘detailed’ by consistently describing something as ‘brief.’” (Dkt. No. 288 at 37 (quoting *Nautilus*, 134 S. Ct. at 2124).)

The term “near” informs a person of ordinary skill in the art about the scope of the invention with reasonable certainty. First, the Court agrees with Rovi’s expert Dr. Balakrishnan that a program description can be both brief and detailed. (Dkt. No. 295 ¶ 14.) Second, the patentee provides examples of program descriptions throughout the ’864 patent that are sufficient to demonstrate the meaning of “detailed program description” to a POSITA. For example, the ’864 patent explains that “[p]referably, two levels of detail are available for the program description” (’864 patent col. 6 ll. 59–60), and provides multiple figures that elucidate the scope of a detailed program description (*see id.* Figures 2–5, 16–18, 21, 33–35). As to Figure 2, for example, the patent describes area 44 as “Program description area **44**” and explains that it “includes the start time and length (duration) of the program being described.” (’864 patent col. 5 ll. 15–19.) The “detailed program description” contemplated by the patent provides information describing the program.

Because one skilled in the art would understand the scope of the term based on examples from the specification, the Court holds that the claim term “detailed program description” is not indefinite. Because the term is simple to understand, the Court affords the term its plain and ordinary meaning.

### 3. “Electronic Program Guide” and “Tuner”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
electronic program guide	’864 Patent Claims 1, 6, & 10	no construction necessary, plain and ordinary meaning	an application that causes the display of a set of screen displays, at least one of them presenting schedule information for television programs, and at least one screen display being responsive to user input
tuner	’864 Patent Claims 1, 6, 10, & 16	no construction necessary, plain and ordinary meaning	an electronic circuit used to selectively receive RF signals in a desired frequency channel

Comcast’s proposed construction is premised, in part, on constructions provided to similar terms in different patents. (Dkt. No. 288 at 38–39 (citing *United Video Props.*, 2012 WL 2370318, at \*4-5, \*13; Dkt. No. 291-11 at 41–42.)) Though Comcast’s construction contains a number of limitations, the parties’ briefing is primarily focused on whether the “electronic program guide” is an “application.”

The patent describes an electronic program guide as a “schedule of program listings” “stored in an electronic memory,” which is “recalled from memory by the viewer on command for display on the television screen.” (’864 patent col 1 ll. 51–54.) “The formats of the electronic program guide are shown in FIGS. 2 to 5.” (*Id.* col. 5 ll. 9–10.) The claims are directed to a “method for displaying an electronic program guide.” (*See id.* col. 22 l. 15; *id.* col. 22 l. 50; *id.* col. 23 l. 17.) Contrary to Comcast’s proposed construction, the patent’s treatment of “electronic program guide” is inconsistent with the concept of an “application.” While

“applications” may be “stored in an electronic memory” and “recalled,” Comcast provides no explanation for how the “format of the [application] is shown” in Figures 2–5 or how the application is “displayed” by the claimed methods.

Accordingly, the Court affords the term “electronic program guide” its plain and ordinary meaning.

As to “tuner,” the parties dispute whether it is properly construed as an “electronic circuit.” For the reasons discussed in relation to the ’595 patent above, the Court adopts Comcast’s proposed construction. Accordingly, the Court construes “tuner” as “an electronic circuit used to selectively receive RF signals in a desired frequency channel.”

**4. “Substantially All of a Currently Broadcast Television Program”**

<b>Term</b>	<b>Claim(s)</b>	<b>Rovi’s Proposed Construction</b>	<b>Comcast’s Proposed Construction</b>
substantially all of a currently broadcast television program	’864 Patent Claims 6 & 10	no construction necessary, plain and ordinary meaning	most of the essential information of the television program including the center part of its image

Comcast’s proposed construction for this term is taken from statements made by the patentee during the prosecution of a continuation application. The Federal Circuit has clarified that “prosecution disclaimer may arise from disavowals made during the prosecution of ancestor patent applications.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1333 (Fed. Cir. 2003). That is, “[w]hen multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.” *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999).

Here, Comcast relies on the prosecution history of Application No. 11/064,219 (“the ’219 patent”). This patent claims priority to, and shares the same title, specification, and inventors with, the ’864 patent. The Patent Office initially rejected the claims because the term “substantially” was “not defined” and “one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.” (Dkt. No. 291-34 at 8.) In response, the patentee expressly defined that term: “[T]he phrase ‘substantially all of an image’ refers to a displayed image that ‘generally conveys most of the essential information of the television program.’” (*Id.*) The patentee relied on the specification’s disclosure that, when the image is obscured, “this results in loss of part of the picture of the television program. But, the remainder of the picture, which is the center part of the image, together with the sound portion thereof generally conveys most of the essential information of the television program.” (*Id.*) Based on this disclosure, “a person of ordinary skill would be reasonably apprised of the meaning of term ‘substantially’ and the scope of the claimed invention.” (*Id.*)

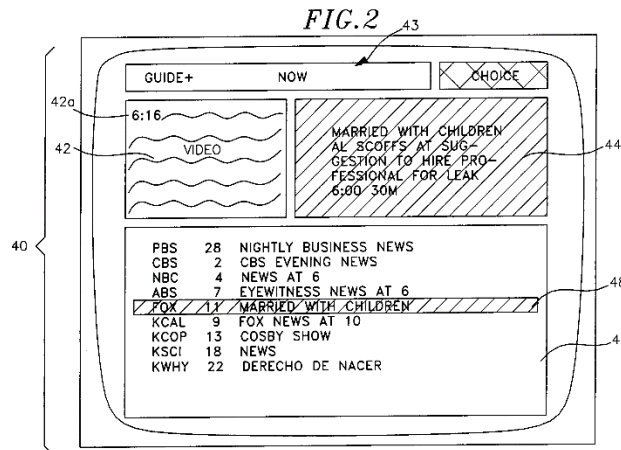
Rovi argues that this prosecution history should not apply to limit the scope of the ’864 patent because the claim language employed by the ’219 patent is different. The ’864 patent claims a method for “simultaneously displaying in a second area of the screen substantially all of a currently broadcast television program” (’864 patent col. 22 ll. 55–57), while the ’219 patent claims a “means for displaying substantially all of an image output by the video signal tuner in a video area of the video display.” (Dkt. No. 191-34 at 2). This is a distinction without a difference because the Patent Office’s rejection of the claims of the ’219 patent for indefiniteness applies with equal force to the ’865 patent, and Rovi does not argue otherwise.

Accordingly, the Court construes “substantially all of a currently broadcast television program” as “most of the essential information of the television program including the center part of its image.”

### 5. “Plurality of [Television] Program Listings”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
plurality of television program listings / plurality of program listings	’864 Patent Claims 1, 4, 5, 6, 10, & 16	no construction necessary, plain and ordinary meaning	information identifying a plurality of television programs and including schedule information

The parties dispute whether the claim term “plurality of television program listings” must include “schedule information.” Comcast argues that “[t]he specification is replete with teachings that the television program listings include scheduling information.” (Dkt. No. 288 at 40.) Yet Comcast’s proposed construction is inconsistent with a preferred embodiment of the invention, at Figure 2, reproduced here:



The specification explains that “[t]he viewer can move a cursor 48 vertically to highlight *one of the program listings* displayed in area 46.” (’864 patent col 5 ll. 19–20.) In Figure 2, the so-called program listings do not include scheduling information. Comcast’s proposed construction



is, therefore, inconsistent with a preferred embodiment. Because “an interpretation which ‘excludes a [disclosed] embodiment from the scope of the claim is rarely, if ever, correct,’” *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013) (alteration in original) (quoting *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013)), the Court affords this term its plain and ordinary meaning.

## **G. Indefiniteness Challenges**

### **1. Section 112(f)**

The statute at 35 U.S.C. § 112(f) (2012) (formerly 35 U.S.C. § 112, ¶ 6), provides that “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” A claim limitation expressed in this fashion is commonly referred to as a means-plus-function claim limitation. When a claim term is drafted in a manner that invokes 35 U.S.C. § 112(f), it is referred to as means-plus-function claiming. This provision “allows a patentee to express a claim limitation by reciting a function to be performed rather than by reciting structure or materials for performing that function. Such a limitation is construed ‘to cover the corresponding structure, materials, or acts described in the specification and equivalents thereof.’” *Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1350 (Fed. Cir. 2003) (quoting 35 U.S.C. § 112, ¶ 6)).

In determining whether § 112(f) applies to a claim limitation, the Federal Circuit “has long recognized the importance of the presence or absence of the word ‘means.’” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc). “[U]se of the word ‘means’ in a claim element creates a rebuttable presumption” that § 112(f) applies, while the failure to do

so creates a rebuttable presumption that § 112(f) does not apply. *Id.* “Merely because a named element of a patent claim is followed by the word ‘means,’ however, does not automatically make that element a ‘means-plus-function’ element.” *Id.* (quoting *Cole v. Kimberly–Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996)). Section 112(f) applies where “the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* “To determine whether a claim recites sufficient structure, ‘it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.’” *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1019 (Fed. Cir. 2017) (quoting *TecSec, Inc. v. Int’l Bus. Machines Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013)).

i. “Interactive Program Guide Configured To . . .”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
<p>user equipment having an interactive television program guide implemented thereon, . . . said interactive television program guide configured to: receive . . . ; store . . . ; cause . . . ; receive . . . ; receive . . . ; direct . . .”</p>	<p>’595 Patent Claim 9</p>	<p>no construction is necessary, plain and ordinary meaning</p>	<p>This is a means-plus-function limitation.</p> <p>Function: receive television programs and program schedule information; store the program schedule information in said memory; cause said display device to display a program guide display; receive a user selection to record, with said video recorder, a first television program indicated on said program guide display; receive a user selection to view a second television program indicated on said program guide display; and direct an output of said first tuner of said first television program selected to be recorded to said video recorder and an output of said second tuner of said second television program selected to be viewed to said display device, such that said first television program selected to be recorded is recorded by said video recorder at the same time that said second television program selected to be viewed is displayed by said display device, and wherein said set-top box includes two tuners, one each for said video recorder and said display device, said two tuners comprising said first tuner and said second tuner.</p> <p>Structure: Indefinite under § 112(f)</p>

Comcast argues that this limitation must be construed pursuant to § 112(f) “because it does not connote sufficient structure for performing the claimed list of functions.” (Dkt. No. 288

at 46.) In that case, Comcast urges, the claim is indefinite for failure to recite a structure that corresponds to the recited function. (*See id.* (“All that the term recites is an interactive television program guide, which is not a structure.”).)

Rovi argues that this claim is not a means-plus-function claim under § 112(f) because it recites “user equipment” as the apparatus that must include the structure recited in the claim. (Dkt. No. 293 at 5.)

Without the use of the word “means” in the claims, there is a rebuttable presumption that § 112(f) does not apply. *Williamson*, 792 F.3d at 1348. And “where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format.” *Sage Prod., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1427–28 (Fed. Cir. 1997). To be sure, the claim discloses functions, as recited in Comcast’s proposed construction. Just as clearly, the claim articulates that this function is performed by an “interactive television program guide implemented” on “user equipment.” Comcast has not rebutted the presumption that § 112(f) does not apply because it has not shown that “user equipment” would not designate sufficient structure to a POSITA. Claim 9 itself describes the “user equipment” as “comprising a display device, a first tuner, a second tuner, a memory, a set-top box, and a video recorder.” (’595 patent col. 31 ll. 51–53.) As such, the Court holds that § 112(f) does not apply, and affords this term its plain and ordinary meaning.

ii. “Set-Top Box with Control Circuitry Configured To . . .”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
set-top box with control circuitry configured to	’595 Patent Claim 9	no construction is necessary, plain and ordinary meaning	<p>§ 112 ¶6</p> <p>Function: “generate for display a display item having a first program function, wherein the first program function is based on a non-markup language, and the first program function is preprogrammed on the set-top box; receive a markup language document from a remote source; interpret the markup language document to determine that the markup language document assigns a second program function to the display item; update the set-top box based on the markup language document such that the display item has the second program function; and generate for display, the display item having the second program function.</p> <p>Structure: Indefinite under § 112(f).</p>

Comcast argues that § 112(f) applies to this claim term, as “control circuitry” does not connote any definite structure and is no different from reciting a general purpose computer. (Dkt. No. 288 at 47.) Rovi points out that Comcast overlooks the recitation of the “set-top box” as the apparatus that must include the structure recited in the claim. (Dkt. No. 293 at 5–6.) Because there is a rebuttable presumption that § 112(f) does not apply—the word “means” is not used—and because the claim recites “set-top box”—which designates structure to a POSITA—§ 112(f) does not apply. As such, the Court affords this term its plain and ordinary meaning.

iii. “Processor for Performing . . .”

Term	Claim(s)	Rovi’s Proposed Construction	Comcast’s Proposed Construction
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 . . .	’034 Patent Claim 16	no construction is necessary, plain and ordinary meaning	<p>This is a means-plus-function limitation.</p> <p>Function: performing a first incremental find, ordering one or more items found in the first incremental find, performing a second incremental find, ordering one or more items found in the second incremental find.</p> <p>Structure: A general purpose CPU processor implementing the algorithm disclosed in 8:36-9:25.</p>

The parties dispute the law applicable in this case. As explained in *Williamson*, the Federal Circuit has “traditionally held that when a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to ‘recite[ ] sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” 792 F.3d at 1348 (emphasis added) (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Comcast does not dispute that “processor” is a structure; rather, it argues that, as a structure, it is insufficient to perform the function required by the claims (*i.e.*, performing an incremental find and ordering the results). Rovi argues that if there is a sufficiently definite structure in the claims, “the inquiry ends and § 112(f) does not apply.” (Dkt. No. 293 at 12.) In particular, Rovi argues, the clause that follows “or else” in *Williamson* “is used to say what will happen if something is not done—*i.e.*, in cases where functional claim language fails to ‘recite

sufficiently definite structure,’ courts may consider whether the claims recite ‘function without reciting sufficient structure for performing that function.’” (Dkt. No. 293 at 12 n.8.)

Rovi’s reading of *Williamson* is inconsistent with the ordinary usage of the phrase “or else,” which is typically used to introduce an alternative. The *en banc* Federal Circuit in *Williamson* twice recited this standard, 792 F.3d at 1348–49, and nowhere indicated that “or else” should take on Rovi’s proposed meaning: namely, that we turn to the second test *only if* the first test is not met.

As such, though Comcast has conceded that “processor” has a sufficiently definite meaning, “this does not end the *Williamson* analysis.” *GoDaddy.com, LLC v. RPost Commc’ns Ltd.*, No. 14 Civ. 126, 2016 WL 212676, at \*56 (D. Ariz. Jan. 19, 2016), *aff’d*, No. 2016-2335, 2017 WL 1829147 (Fed. Cir. May 5, 2017). Under *Williamson*, § 112(f) will apply—even though the patentee did not use the term “means”—if the claim “recites ‘function without reciting sufficient structure for performing that function.’” *Williamson*, 792 F.3d at 1349 (quoting *Watts*, 232 F.3d at 880). Here, the claim term at issue provides that the “processor” is “for performing a first incremental find . . . and for ordering one or more items found in the first incremental find” and “also for performing a second incremental find . . . for ordering one or more items found in the second incremental find.” (’034 patent col. 12 l. 32–col. 13 l. 1.)

As taught by Comcast’s expert, Dr. Kelly, off-the-shelf processors cannot perform the claimed incremental find and ordering functions of claim 16. (Dkt. No. 290 ¶¶ 23–24.) That is, “[b]ecause the patent calls for a processor to perform more than a general function, an algorithm is required.” *Velocity Patent LLC v. Mercedes-Benz USA, LLC*, No. 13 Civ. 8413, 2016 WL 5234110, at \*6 (N.D. Ill. Sept. 21, 2016) (citing *EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 623 (Fed. Cir. 2015)) (“A microprocessor or general purpose computer lends

sufficient structure only to basic functions of a microprocessor. All other computer-implemented functions require disclosure of an algorithm.”)). Rovi does not dispute that the finding and ordering functions of the patent are not typical functions found in a general purpose processor.

The Court concludes that the term “processor” as used in claim 16 is a term that a POSITA would not understand as having sufficient structure for performing the recited functions of “performing a[n] . . . incremental find . . . and for ordering one or more items found in the . . . incremental find.” Therefore, § 112(f) applies. *See Velocity Patent*, 2016 WL 5234110, at \*6; *GoDaddy.com*, 2016 WL 212676, at \*56.

“In construing a means-plus-function claim, the district court must first determine the claimed function and then identify the corresponding structure in the written description of the patent that performs that function.” *Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010). Here, the claimed function is “performing a[n] . . . incremental find . . . and for ordering one or more items found in the . . . incremental find.” Comcast notes that “[t]he only disclosed structure that comes close to describing how to perform these functions is the algorithmic structure described in the specification at 8:36–9:25.” (Dkt. No. 288 at 48.) Comcast also notes that an “algorithmic structure may be found at 6:6–42 and Figure 4,” though it may fail to teach certain ranking function of the claim. (Dkt. No. 288 at 49 n.33.) Rovi does not direct the Court to any portion of the specification that recites a corresponding structure that performs the claimed function.

Accordingly, the Court adopts Comcast’s proposal: this claim term is limited to the algorithmic structures found in the specification of the ’034 patent.



## 2. Mixed Statutory Classes

Term	Claim(s)	Rovi's Proposed Construction	Comcast's Proposed Construction
wherein a set-top box includes two tuners	'595 Patent Claims 1 & 17	no construction is necessary, plain and ordinary meaning	indefinite

Claim 1 of the '595 patent is a method claim; Claim 17 is a Beauregard claim. “A Beauregard claim—named after *In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995)—is a claim to a computer readable medium (e.g., a disk, hard drive, or other data storage device) containing program instructions for a computer to perform a particular process.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011). The Federal Circuit has instructed that Beauregard claims, such as claim 17, are treated as method claims. *See Digital-Vending Servs. Int'l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270, 1276 n.1 (Fed. Cir. 2012) (Beauregard claims “should be treated as method claims to avoid ‘exalt[ing] form over substance’” (quoting *CyberSource*, 654 F.3d at 1374)).

Pursuant to 35 U.S.C. § 112, ¶ 2, a single claim combining “two separate statutory classes of invention,” such as “an apparatus and a method of using that apparatus,” is indefinite as “not sufficiently precise to provide . . . an accurate determination of the ‘metes and bounds’ of protection involved.” *IPXL Holdings*, 430 F.3d at 1384 (quoting *Ex Parte Lyell*, 17 U.S.P.Q.2d 1548, 1550–51 (P.T.O. Aug. 16, 1990) (internal quotation marks omitted)); *see also* Manual of Patent Examination Procedure (“MPEP”) § 2173.05(p)(II) (“A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph.”).

Comcast argues that claims 1 and 17 are both indefinite for inclusion of the phrase “wherein a set-top box includes two tuners,” which describes an apparatus but is located in the

method claims. (Dkt. No. 288 at 49–50.) Specifically, Comcast argues that “it is unclear whether infringement occurs when one practices each step of the method or whether one must also create a set-top box having two tuners.” (*Id.* at 50.)

Rovi argues that inclusion of the phrase “wherein a set-top box includes two tuners” simply “limits the method to being practiced only within this environment.” (Dkt. No. 293 at 6.) That is, infringement occurs when one practices each step of the methods described in claims 1 and 17. These methods are directed to controlling two tuners within the disclosed structure—a set-top box with two tuners.

The Federal Circuit has explained that a finding of indefiniteness for claims that contain two separate statutory categories of invention is premised on “the lack of clarity as to when the mixed subject matter claim would be infringed.” *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008). Here, there is no such ambiguity as to claims 1 and 17 of the ’595 patent. These claims are limited to practicing the claimed method on a set-top box with two tuners. The inclusion of the phrase “wherein a set-top box includes two tuners” provides context and simply limits the claimed method to being practiced in the disclosed environment.

**IV. Conclusion**

For the foregoing reasons, the Court adopts the constructions set forth in this Opinion.

The Court also adopts the constructions of the “Agreed Terms” as detailed in the parties’ Third Amended Joint Claim Terms Chart. (*See* Dkt. No. 306-1.)

SO ORDERED.

Dated: August 10, 2017  
New York, New York



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J. PAUL OETKEN  
United States District Judge