

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

MULTIMEDIA TECHNOLOGIES PTE.	§	
LTD.,	§	
	§	
Plaintiff,	§	
	§	
v.	§	CASE NO. 2:22-cv-0494-JRG-RSP
	§	
LG ELECTRONICS INC. AND	§	
LG ELECTRONICS USA, INC.,	§	
	§	
Defendant.	§	

CLAIM CONSTRUCTION ORDER

Before the Court is the Opening Claim Construction Brief (Dkt. No. 62) filed by Plaintiff Multimedia Technologies Pte. Ltd. Also before the Court is the Responsive Claim Construction Brief (Dkt. No. 67) filed by LG Electronics Inc. and LG Electronics USA, Inc. Also before the Court is Plaintiff’s Reply Claim Construction Brief (Dkt. No. 70).

The Court held a hearing on May 31, 2024. Having considered the parties’ briefing along with arguments of counsel, the Court resolves the disputes as ordered herein.

I. BACKGROUND

Plaintiff alleges infringement of eleven patents: U.S. Patent Nos. 9,055,254 (“the ’254 Patent”), 9,237,291 (“the ’291 Patent”), 9,232,168 (“the ’168 Patent”), 9,247,174 (“the ’174 Patent”), 9,578,384 (“the ’384 Patent”), 9,820,003, (“the ’003 Patent”), 10,419,805 (“the ’805 Patent”), 9,426,527 (“the ’527 Patent”), 9,055,255 (“the ’255 Patent”), 9,185,325 (“the ’325 Patent”), U.S. Patent No. 9,510,040 (“the ’040 Patent”) (collectively, the “Patents-in-Suit”). The parties do not dispute any claim terms in the ’040 Patent, whereas the remainder of the Patents-

in-Suit will be addressed in this Order. The Patents-in-Suit all derive from the same patent family and are in the field of smart TVs.

The Court provided the parties with preliminary constructions in advance of the May 31, 2024, hearing for the purpose of guiding oral arguments. To the extent the Court's claim constructions herein differ from the preliminary constructions, this order controls.

II. THE PATENTS-IN-SUIT

The Patents-in-Suit stem from the same patent family claiming priority from the same set of sixteen provisional applications. Though the patents are related and in the field of smart TVs, their titles and abstracts differ.

The '254 Patent bears the title "On screen method and system for changing television channels" and the Abstract states:

A method, system, and executable instructions are provided that receive a request to change a programming channel, display, on the television screen, an on screen channel changer, the on screen channel changer comprising electronic program guide ("EPG") information and a number input bar comprising digits, receive, from the remote control, a channel selection based on digits using the on screen channel changer, and change to the selected channel.

The '291 Patent bears the title "Method and system for locating programming on a television" and the Abstract states:

A method, system, and executable instructions are provided that obtain, from a network accessible content provider, electronic program guide ("EPG") information, the EPG information comprising, for each program, airtime, program name, program channel, and program description, display, on a screen of a television, a search panel, the search panel comprising a search term field to receive a search term and at least one previous search term used by the user in a prior search, wherein selection of the at least one previous search term initiates a search of the EPG information using the at least one previous search term as one or more selected search term, perform the search using one or more selected search terms, the one or more selected search terms being received in the search term field or a selected previous search term, obtain a set of search results, the set of search results comprising EPG information corresponding to multiple channels and/or programs,

display the search results on the television screen, receive, from a remote control of the user, a program selection from the displayed search results, and change a current channel to a channel broadcasting the program selection.

The '168 Patent bears the title “Systems and methods for providing user interfaces in an intelligent television” and the Abstract states:

An intelligent television can provide various interfaces for navigating processes associated with providing content. The user interfaces include unique visual representations and organizations that allow the user to utilize the intelligent television more easily and more effectively. Particularly, the user interfaces pertain to the display of media content, electronic programming guide information, television content, and other content. Further, the user interfaces provide unique process of transitioning between the content.

The '174 Patent bears the title “Panel user interface for an intelligent television” and the Abstract states:

An intelligent television and methods for displaying content are disclosed. Specifically, a user may cause an application panel to be displayed, which displays content based on the panel tab selected by the user and the content being actively displayed on the intelligent television; that is, the layout, information, and content of the application panel depends on the content being displayed by the intelligent television. For example, upon receiving a selection from the user, the intelligent television may display one or more items of information that are associated with the content currently being displayed in an active content window. Additionally, the user may select a tab corresponding to specific information about the active content window. As the application panel is used to navigate through various screens in the intelligent television, the application panel itself does not obstruct the user from viewing content displayed on the screen of the intelligent television.

The '384 Patent bears the title “Systems and methods for providing video on demand in an intelligent television” and the Abstract states:

An intelligent television can provide various interfaces for providing video-on-demand (VOD). The user interfaces include unique visual representations and organizations that allow the user to utilize the intelligent television more easily and more effectively. Particularly, the user interfaces pertain to the display of VOD content and better organizations thereof. Further, the user interfaces provide unique process of transitioning between the VOD content.

The '003 Patent bears the title “Application panel manager” and the Abstract states:

An Intelligent TV having a silo manager, a panel manager and a panel controller. The various managers and controllers managing a global panel and an application panel. The global panel includes various types of information and the various types of input and content available. The global panel includes various information including, for example, Live TV information, on demand information, media center information, application information, HDMI 1 information, HDMI 2 information, HDMI 3 information, component 1 information, component 2 information, AV 1 information, AV 2 information, VGA information, as well as an option to hide undetected inputs. The application panel is dynamic and can optionally change based on one or more of context and content of the underlying application being viewed. The application panel can include various subcategories of information, with the number and type of the subcategories also capable of being dynamic based on the underlying context or content.

The '805 Patent bears the title “Data service” and the Abstract states:

A data service system in an Intelligent Television (TV) includes an internal content provider module configured to provide content to video hardware or display of the Intelligent TV or to a content provider module or application of the Intelligent TV and a subservice configured to provide the internet content provider module with requested data for a pre-defined data model. The internal content provider module is loaded on the Intelligent TV responsive to a user action or a schedule event on the Intelligent TV, and the internal content provider module organizes the received data from the subservice as the content according to a pre-defined format. The internal content provider module includes an EPG data provider, a media data provider, a media browser, a media scanner, and/or a thumbnail engine.

The '527 Patent bears the title “Systems and methods for providing video on demand in an intelligent television” and the Abstract states:

An intelligent television can provide various interfaces for providing video-on-demand (VOD). The user interfaces include unique visual representations and organizations that allow the user to utilize the intelligent television more easily and more effectively. Particularly, the user interfaces pertain to the display of VOD content and better organizations thereof. Further, the user interfaces provide unique process of transitioning between the VOD content.

The '255 Patent bears the title “Live television application on top of live feed” and the Abstract states:

An intelligent television and methods for user interaction between the intelligent television and the user are provided. In general, a user is provided with navigation, notification, and setup options which enable one or more functions associated with the intelligent television. The presentation of options is based on input received by the intelligent television. As a user provides input to the intelligent television via a remote control or other input device, the intelligent television is configured to interpret the input and provide interactive functionality in the form of content presented to the display of the intelligent television.

The '325 Patent bears the title “Systems and methods for providing video on demand in an intelligent television” and the Abstract states:

An intelligent television can provide various interfaces for providing video-on-demand (VOD). The user interfaces include unique visual representations and organizations that allow the user to utilize the intelligent television more easily and more effectively. Particularly, the user interfaces pertain to the display of VOD content and better organizations thereof. Further, the user interfaces provide unique process of transitioning between the VOD content.

The '040 Patent bears the title “Global panel” and the Abstract states:

The present disclosure is related to methods and systems of displaying content on a television, including: receiving an indication associated with a selection by a user; determining, based on the received indication, a global panel to display via the television; retrieving from memory, a first content information for display in the global panel; and displaying, via the television, the retrieved content information in the specified global panel.

III. LEGAL STANDARDS

“‘[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*) (quoting *Innova/Pure-Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). “[T]he court has the power and obligation to construe as a matter of law the meaning of

language used in the patent claim.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*); *aff’g*, 517 U.S. 370, 390 (1996).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

When construing claims, “[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1312–13). Courts must therefore “look to the words of the claims themselves . . . to define the scope of the patented invention.” *Id.* (citations omitted). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313. This “person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). As the Supreme Court stated long ago, “in case of doubt or

ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office (“PTO”) understood the patent. *Phillips*, 415 F.3d at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

Intrinsic evidence, therefore, is the primary resource for claim construction. See *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips*, 415 F.3d at 1312). But for claim terms with less-apparent meanings, courts consider “ ‘those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean[,] [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific

principles, the meaning of technical terms, and the state of the art.’ ” *Phillips*, 415 F.3d at 1314 (quoting *Innova*, 381 F.3d at 1116). In those situations, “the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

However, the intrinsic record may not be sacrificed in favor of extrinsic evidence. According to *Phillips*, reliance on dictionary definitions, for example, at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321.

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 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.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Id.* The claims “must be precise enough to afford clear notice of what is claimed,” but that consideration must be made while accounting for the inherent limitations of language. *Id.* at 908. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

IV. AGREED TERMS

The parties have reached agreement on the following terms and constructions as submitted in their Joint Claim Construction Chart Pursuant to P.R. 4-5(d). (Dkt. 72.)

Term	Agreed Construction
“socket” (’254 Patent, claims 1, 9)	Plain and ordinary meaning
“A method for providing a user interface in an intelligent television, the method comprising:” (’168 Patent, claim 1)	Preamble is limiting
“An intelligent television system comprising:” (’168 Patent, claim 11)	Preamble is limiting
“A method for displaying content on a television, comprising:” (’174 Patent, claim 1)	Preamble is limiting
“A system for displaying content on a television, comprising:” (’174 Patent, claim 10)	Preamble is limiting
“A method for displaying content on a television, comprising:” (’040 Patent, claim 1)	Preamble is limiting
“A non-transitory computer readable information storage medium having stored thereon instructions that cause a computing system to execute a method of displaying content on a television, comprising:” (’040 Patent, claim 11)	Preamble is limiting

“A system for displaying content on a television, comprising:” (’040 Patent, claim 21)	Preamble is limiting
“A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:” (’384 Patent, claim 1)	Preamble is limiting
“A method of managing an application panel on an intelligent television (TV) comprising:” (’003 Patent, claim 1)	Preamble is limiting
“A system to manage an application panel on an intelligent television (TV) comprising:” (’003 Patent, claim 9)	Preamble is limiting
“A method for providing content for a television (TV), the method comprising:” (’805 Patent, claim 1)	Preamble is limiting
“A data service system in a Television (TV), the system comprising:” (’805 Patent, claim 10)	Preamble is limiting
“A computer program product for providing content for a Television (TV), the computer program product comprising a non-transitory computer-readable storage medium having computer-readable program code embodied therewith, the computer-readable program code configured when executed by a processor to:” (’805 Patent, claim 17)	Preamble is limiting
“A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:”	Preamble is limiting

('527 Patent, claim 1)	
“A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:” ('325 Patent, claim 1)	Preamble is limiting
“A method of presenting a user interface implemented on an intelligent television (TV), comprising:” ('255 Patent, claim 1)	Preamble is limiting
“A tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, implement the method of presenting a user interface, the method comprising:” ('255 Patent, claim 10)	Preamble is limiting

V. DISPUTED TERMS

Patent No. 9,237,291

1. “external content sources”

Claim Term	Plaintiff’s Construction	Defendant’s Construction
“external content sources” ('291 Patent, claims 1, 2, 3, 4, 9, 10, 11)	Plain and ordinary meaning	“content sources outside of the microprocessor executable content aggregation service”

The parties agree that “external content sources” are external to the TV. However, they disagree on whether it must be external to the “microprocessor executable content aggregation service,” a term that also appears in the claims.

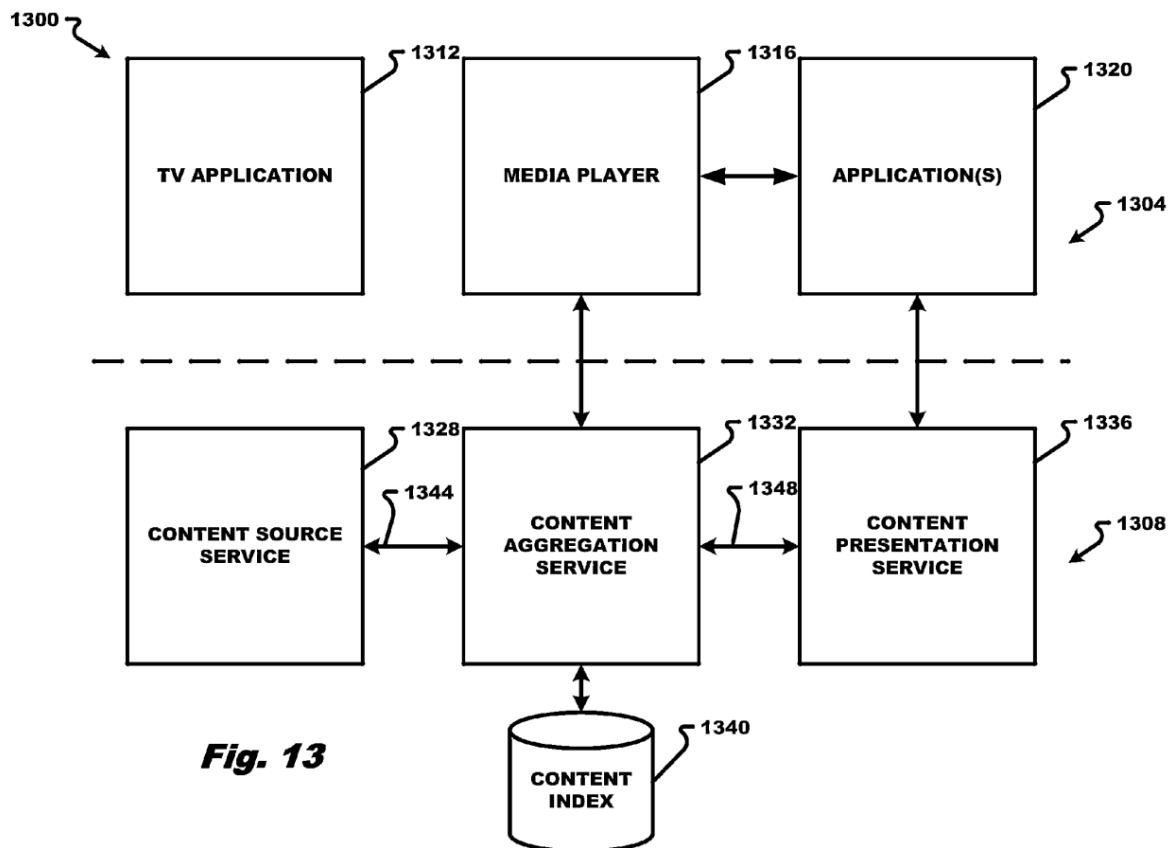
LG argues that the “external content sources” must be external to the “microprocessor executable content aggregation service” because the claims identify them as separate limitations. According to LG, this separation is further evidenced by how the claims recite “providing, *by* the microprocessor executable content aggregation service, the second selected set of search terms *to* plural external content sources” Additionally, LG points to the patent specification that references sending communication “to and from” the content aggregation service (’291 Patent, 23:22-24).

Multimedia disagrees, explaining that although the “microprocessor executable content aggregation service” is a separate limitation in the claims, it receives search results from a plurality of both local databases and external sources. Multimedia contends that the designation of “local” and “external” is with regard to the TV and not with regard to the content aggregation service. In other words, the location of the “external content sources” is only spatially relevant as to the TV and not as to the content aggregation service. This, according to Multimedia, is the plain and ordinary meaning of the term.

Looking at claims 1 and 9, the Court notes that the claimed objects are “external content *sources*,” which is different from the “microprocessor executable content aggregation *service*.” One is a source and the other is a service. The comparison that LG attempts to advance is comparing apples to oranges because determining whether a source is external to a service makes little sense. Instead, the question of what the content source is external to is answered by claim 1 in how it separates what is “local” from what is “non-local.” When the “microprocessor

executable content aggregation service” receives local search results, they are received from “a local database of the television.” And when the “microprocessor executable content aggregation service” receives non-local search results, they are from “the plural external content sources.” This distinction in the claim language suggests that “external content sources” simply refers to content sources being external to the TV.

The specification reinforces this interpretation. FIG. 13, reproduced below, shows “an exemplary content aggregation architecture 1300 [having] a user interface layer 1304 and content aggregation layer 1308.” (’291 Patent, 22:47-49.)



“The content source layer 1308 includes, as *data services*, a content source service 1328, a content aggregation service 1332 and a content presentation service 1336.” (*Id.* at 22:61-63) (emphasis added). The service that the content source service 1328 provides is to track content

sources (the “external content sources”), which the content aggregation service 1332 then manages, and the content presentation service 1336 presents via an interface. (*Id.* at 23:12-21.) As shown in FIG. 13, the content source service and content aggregation service communicate with each other, depicted as the double arrow 1344. This is the communication “to and from” cited by LG to suggest the content sources are external to the “microprocessor executable content aggregation service.” But LG’s reading is incorrect. The content source *service* is not the same thing as the external content sources. The service simply tracks down content from various content sources, including content sources that are external to the TV.

The Court therefore finds **“external content sources” to mean “content sources external to the television.”**

2. “a website other than the foregoing plural external content sources”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“a website other than the foregoing plural external content sources” (’291 Patent, claims 2, 10)	Plain and ordinary meaning	“a web site other than an email server, an instant messaging service, a blogging service, a social media site, EPG content source, the ‘a Web site other than the EPG content source’ from claim 1, the ‘Internet site’ of claim 1, and the one or both of cable and satellite content sources other than the Internet site”

The issue to be resolved as to this claim term is whether “the foregoing plural external content sources” refers only to “the plural external content sources” listed in claim 2 or also includes “the plural external content sources” in the preceding claim 1. Notably, claim 2 is a claim that depends from claim 1.

The relevant portions of claim 1 of the '291 Patent disclose what the plural external content sources include and does not include:

“accessing, *from a network accessible external content source, electronic program guide (“EPG”) information*, the EPG information comprising, for each program, airtime, program name, program channel, and program description;”

“providing, by the microprocessor executable content aggregation service, the second selected set of search terms to plural external content sources, *wherein the plural external content sources comprise a Web site other than the EPG content source*;”

“receiving, by the microprocessor executable content aggregation service, non-local search results responsive to the second selected set of search terms from the plural external content sources, *the plural external content sources comprising an Internet site and one or both of cable and satellite content sources other than the Internet site*; the non-local search results comprising EPG information corresponding to multiple channels and/or programs;”

Dependent claim 2 goes into further detail:

“The method of claim 1, *wherein the plural external content sources comprise a plurality of an email server, an instant messaging service, a data service other than a Web site, a blogging service, a social media site, and a Web site other than the foregoing plural external content sources*.”

The relevant portions of independent claim 9 and its dependent claim 10 are similarly worded.

Multimedia urges the plain and ordinary meaning of this term, arguing that the dependent claim does not add additional components to those recited in claim 1 but rather provides more specificity. In particular, Multimedia submits the reference to “a Web site other than the foregoing plural external content sources” in dependent claim 2 refers to the same “Web site other than the EPG content source” from claim 1.

LG disagrees, arguing that the claims specify multiple websites because “the foregoing plural external content sources” necessarily includes all previously listed external content sources from both claims 1 and 2. According to LG, “a website other than the foregoing plural external content sources” recited in claim 2 must exclude the previously disclosed “a web site

other than the EPG content source” as well as the “Internet site and one or both of cable and satellite content sources other than the Internet site” from claim 1.

It is axiomatic that a dependent claim must “specify a further limitation of the subject matter claimed” and “shall be construed to incorporate by reference all the limitations of the claim to which it refers.” 35 U.S.C. § 112(d). The “plural external content sources” in claim 1 includes: (i) electronic program guide (“EPG”) information, (ii) a Web site other than the EPG content source, (iii) an Internet site, and (iv) one or both of cable and satellite content sources other than the Internet site. Claim 2 then adds on (v) an email server, (vi) an instant messaging service, (vii) a data service other than a Web site, (viii) a blogging service, (ix) a social media site, and (x) a web site other than the foregoing plural external content sources. All of these items are included in the “plural external content sources” in claim 2.

Moreover, claim 2 recites “a Web site” instead of “the Web site,” which implies it is referring to a new website not previously identified. This wording that avoids claiming antecedent basis, in combination with the proper reading of claim 1 being fully incorporated by reference within claim 2, and further combined with use of the word “foregoing” suggests that this term refers to a new website other than the previously identified plural external content sources in claims 1 and 2.

The Court therefore finds “**a website other than the foregoing plural external content sources” to mean “a web site other than an email server, an instant messaging service, a blogging service, a social media site, EPG content source, the ‘a Web site other than the EPG content source’ from claim 1, the ‘Internet site’ of claim 1, and the one or both of cable and satellite content sources other than the Internet site.”**

Patent No. 10,419,805**3. “data relevant to one or more scheduled events”**

Claim term	Plaintiff’s Construction	Defendant’s Construction
“data relevant to one or more scheduled events” (’805 Patent, claims 1, 10, 17)	Plain and ordinary meaning	“data relevant to one or more actions of the television occurring at a predetermined time”

The parties disagree over whether (i) the “events” must be actions of the TV, and whether (ii) “scheduled” must have a temporal component.

Multimedia contends that this term should be given its plain and ordinary meaning because nothing in the claims requires the events to be actions of the TV. Regarding scheduling, Multimedia points out that LG’s construction of “occurring at a predetermined time” would read out the single embodiment from the specification disclosing the scheduled event as something that occurs continuously in the background. (*See* ’805 Patent, 34:25-37.)

LG responds that, regarding the first point, the patent specification describes the scheduled event as coming from the TV: “schedule event from Intelligent TV 100.” (*Id.* at 34:4-8.) As for the temporal component, LG concedes that the patent is silent on what “scheduled” means so it cites to a dictionary definition that “scheduled” means “entered in a schedule; planned, appointed, arranged (to happen at a specified time)”. (*See* Dkt. No. 67-2.)

The Court considers the two issues separately. Regarding (i) whether the “events” must be actions of the TV, the Court looks to the claims themselves. Using claim 1 as exemplary, it claims a method of providing content for a TV comprising “receiving, by a processor, data relevant to one or more scheduled events from one of a corresponding subservice of a plurality of subservices, wherein the plurality of subservices comprises a video-on-demand (VOD)

subservice, electronic programming guide (EPG) subservice, and a media subservice.” Thus the “data relevant to one or more scheduled events” comes from the plurality of subservices and is received by the processor. The claim does not specify that the plurality of subservices must be located on the TV or the events must be actions of the TV. Indeed, only the processor is a component of the TV and it performs the passive step of receiving the “data relevant to one or more scheduled events,” and leaves open from where the scheduled events arrive. LG’s argument relying upon a line in the specification seeks to import a limitation from an embodiment. It is improper to do so.

Regarding issue (ii) of whether “scheduled” must have a temporal component, the specification makes clear that scheduled event does not have to occur at a predetermined time. It can simply be programmed, such as to run continuously, as disclosed in an embodiment. (*See id.*, 34:25-37 (“Internal content provider modules 1416 may also load in response to scheduled events . . . [it] may be loaded in the background and runs continuously . . . ”)). Moreover, LG’s dictionary definition supports this interpretation as it also defines “schedule” as “a timetable, plan, programme, or scheme.” (Dkt. No. 67-2.) As in, the scheduled events follow a certain scheme in how they run, whether at a predetermined time or on a continuous basis.

The Court therefore finds that **the term “data relevant to one or more scheduled events” should be given its plain and ordinary meaning.**

Patent No. 9,232,168

- 4. “determining if a second user interface, associated with the selection, can contain a second navigation bar”/ “if a second user interface, associated with the**

selection, can contain a second navigation bar, rendering a horizontal navigation bar as the second navigation bar in the second user interface”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“determining if a second user interface, associated with the selection, can contain a second navigation bar” (’168 Patent, claims 1, 11)	Plain and ordinary meaning	“determining if a second user interface associated with the selection has enough available space to display a second navigation bar”
“if a second user interface, associated with the selection, can contain a second navigation bar, rendering a horizontal navigation bar as the second navigation bar in the second user interface” (’168 Patent, claims 1, 11)	Plain and ordinary meaning	“if a second user interface associated with the selection has enough available space to display a second navigation bar, rendering a horizontal navigation bar as the second navigation bar in the second user interface”

The core dispute as to these terms is whether the phrase “can contain” is ambiguous and should be interpreted to mean “has enough available space to display” as described in the specification.

Multimedia contends that LG attempts to insert unnecessary language into a straightforward term that is not ambiguous as written. Multimedia does not believe there is a dispute as to the general scope of this limitation as it is simply an evaluation of whether and how a second interface can be presented to the user. It argues that LG’s additional language renders the claim element more confusing because whether the user interface “has enough available space” adds modifiers without first providing adequate context.

LG disagrees, stating that the claim language is unclear as to what it means to “determine” if the interface “can contain” a navigation bar. Therefore, it looks to the specification, which explains:

In step 2120, the panel manager 536 determines if the user interface, based on its format and characteristics, ***can contain*** the navigation bar based on the navigation bar's content and format, in step 2120. In some circumstances, the panel manager 536 must determine the space available for the navigation bar in the banner section of the user interface, or another section of the user interface, and the amount of content that needs to be displayed by the navigation bar. ***Based on the available space and the amount of space needed, the panel manager 536 can determine if the navigation bar can be displayed in certain situations or in certain locations.*** If the portion of the user interface can contain the navigation bar, then method 2100 proceeds YES to step 2124. However, if the user interface cannot contain the navigation bar, then method 2100 proceeds NO to step 2128.

('168 Patent, 45:44-58 and Fig. 21) (emphasis added). LG's proposed construction of "has enough available space to display" derives from this portion of the specification.

To determine whether these claim terms are ambiguous and require interpretation, the Court first looks to the claim language itself. The disputed terms are found in independent claims 1 and 11, which require a determination to be made as to whether a second user interface "can contain a second navigation bar." Claims 4 and 13 are dependent claims that relate back to claims 1 and 11 while adding the further limitation of "wherein the determination of if a second user interface, associated with the selection, can contain a second navigation bar comprises the processor ***comparing one or more of the content and the format*** of the second navigation bar ***with one or more of the format and the characteristic*** of the second user interface." The language in these dependent claims is broader than LG's proposed construction, which means that LG's proposed construction cannot be correct. The scope of independent claims 1 and 11 must therefore be broader still because, as explained earlier, a dependent claim must "specify a further limitation of the subject matter claimed." 35 U.S.C. § 112(d). Accordingly, the "determination" element in claims 1 and 11 must, at a minimum, compare the content and format of the second navigation bar with the format and characteristic of the second user interface which includes, but is not limited to, an evaluation of whether there is enough available space, as described in the specification. Notably, the quoted section of the specification is written in a non-

limiting nature. LG's citation contains the caveat that only "[i]n some circumstances" is the determination made based on "space available" and the "amount of space needed." ('168 Patent, 45:47-58.) Such comports with the broader scope written into the claim terms.

The Court therefore finds that **both terms should be given their plain and ordinary meaning.**

5. "if a second user interface, associated with the selection, cannot contain a second navigation bar, rendering a different user interface device for the second navigation bar in the second user interface"

Claim Phrase	Plaintiff's Construction	Defendant's Construction
"if a second user interface, associated with the selection, cannot contain a second navigation bar, rendering a different user interface device for the second navigation bar in the second user interface" ('168 Patent, claims 1, 11)	Not indefinite; plain and ordinary meaning	Indefinite In the alternative, "if a second user interface associated with the selection does not have enough available space to display a second navigation bar, rendering a different interface as the second navigation bar in the second user interface"

The issue is whether the claim phrase "a different user interface device" is indefinite for lack of antecedent basis because there is not a "first user interface device" recited in the claims.

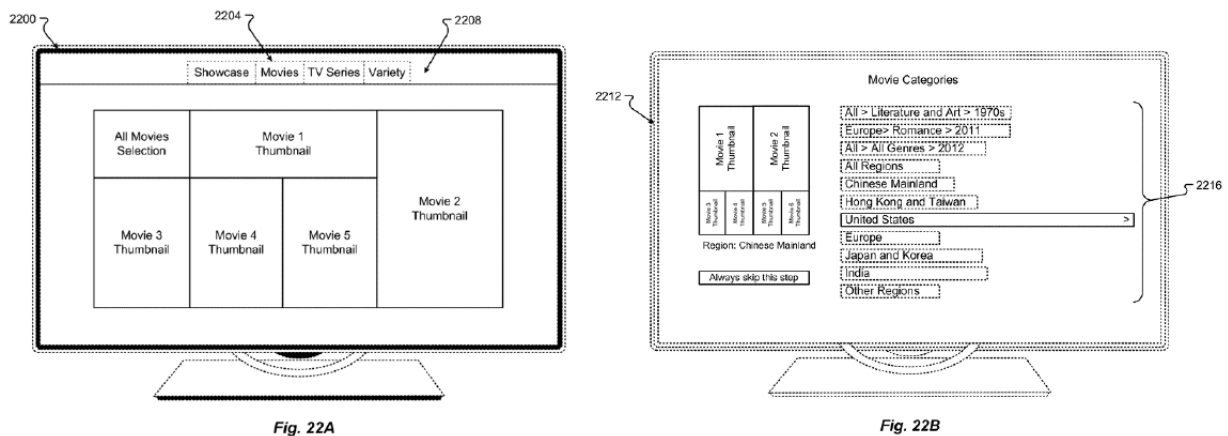
Taking claim 1 as exemplary, the relevant elements read as follows:

determining if a second user interface, associated with the selection, can contain a second navigation bar;

if a second user interface, associated with the selection, can contain a second navigation bar, **rendering a horizontal navigation bar as the second navigation bar in the second user interface;** and

if a second user interface, associated with the selection, can not contain a second navigation bar, **rendering a different user interface device for the second navigation bar in the second user interface.**

Multimedia submits this claim term is not indefinite because the “a different user interface device” in the last claim element is differentiated from the predicate “horizontal navigation bar as the second navigation bar,” which provides the antecedent basis. Multimedia explains that when a user selects from a navigation bar in a first user interface, the television either presents “a horizontal navigation bar as the second navigation bar” in a second user interface or presents “a different user interface device” in the second user interface. Multimedia points to FIGS. 22A and 22B in the specification as showing two examples of different user interface devices that can be displayed based on the context:



Ex. 1, Figs. 22A, 22B

LG responds that “a different user interface device” is more akin to the oft-used “user interface” even though the appendage of the word “device” means the inventor intended to claim different things. Yet the claims do not introduce a first “user interface device” which the “different user interface device” must be different from. For that reason, LG argues that this term lacks antecedent basis and must be found indefinite. In the alternative, LG contends the only plausible construction is to clarify that it refers to “a different user interface” (removing “device”), meaning one that is “different” from the “user interface” previously recited in the preamble.

As a preliminary matter, the Court agrees that the claims and the specification both use the terms “user interface” and “user interface device” in a way that imparts different meanings. In addition to the phrases using slightly different wording, claim 1 introduces “a user interface” in the preamble and later introduces “a second user interface” while consistently referring back to their respective antecedents by the proper usage of “the user interface” and “the second user interface.” Both uses identify the “user interface” as a display in an intelligent television that receives selections from a user. This is supported by the specification, which explains that “[t]he systems and methods herein provide new user interfaces for processes associated with the Intelligent TV. The user interfaces have an intuitive layout, structure, organization, and methodology. Thus, the user can more easily learn and navigate the options of the Intelligent TV.” (’168 Patent, 13:65-14:2.) Additionally, FIG. 22A and 22B (shown above) show embodiments of user interfaces for an intelligent TV. (*Id.* at 22:40-43.) Once a determination is made as to whether the user interface can contain the navigation bar, “if the content of that navigation bar is too great to be provided over the banner area, as shown in FIG. 22A, the user interface may have to change to another user interface 2212, as shown in FIG. 22B.” (*Id.* at 45:29-32.) Accordingly, the “user interface” is the display on the screen that receives user input.

“User interface device,” however, only appears once in claim 1 and the meaning is less apparent. In its briefing, Multimedia suggests it means an alternative to “a horizontal navigation bar.” Yet, the specification provides a different context. With reference to FIG. 22A, “*four* different user interface devices” are identified in the “single banner navigation bar across the top of the screen . . . that may be selected by a user.” (’168 Patent, 45:27-29) (emphasis added). An example of a “user interface device” is the “movies user interface device 2204, shown in user interface 2200 of FIG. 22A.” (*Id.* at 45:19-20.) And in FIG. 22B, “the navigation bar 2216 is

displayed vertically as *a series of user selectable devices* arranged in rows [that] are provided because the navigation bar could not be displayed across the top of a banner with the amount of information that needs to be provided in the navigation bar.” (*Id.* at 45:33-37) (emphasis added). From that description, the user interface devices appear not to be the navigation bar but are instead each of the user selectable buttons.

During the hearing, the meaning of a “user interface device” became even less clear when Multimedia broadened its definition by saying that intrinsic evidence shows a “user interface device” is something that is part of a “user interface.” It argued that a “user interface device” can be a button *or an entire menu*, citing to the specification description of how “blurring of the content may be made during channel changes when other menus are provided or other types of user interface devices are provided in the user interface.” (’168 Patent, 51:17-19.) When asked if the “user interface device” is the navigation bar as set forth in its briefing, Multimedia responded by arguing that the horizontal navigation bar is simply *a form of* a user interface device, which can be a broader category of menus, drop down menus, vertical navigation bars, and other things that are some element of the user interface. Multimedia then pointed to FIG. 32 as showing yet another version of a user interface device where a picture and a caption is identified as the user interface device 3200. (*Id.* at 50:30-42.)

Having heard the parties’ arguments and reviewed the briefing, the Court finds that “user interface device” cannot be any one of a navigation bar, a menu, a button, a captioned picture, or any arbitrary element of the user interface and still impart meaning. Especially because a menu is also equated with a “user interface” in the specification such that it is indiscernible what subset of the user interface, if any, is the user interface device. (’168 Patent, 49:3-5 (“Here, the Intelligent TV 100 can receive a selection for a menu or user interface”). Neither party

contends that this term has a commonly understood meaning known in the art and it is rendered utterly ambiguous by the inconsistent applications in the intrinsic evidence.

Thus, the clear and convincing weight of the evidence shows that the usage of “user interface device” in the claim and in view of the intrinsic evidence, as emphasized by counsel’s argument, has no discernable meaning and therefore fails to inform with reasonable certainty those skilled in the art about the scope of the invention.

Accordingly, the Court finds this term to be **indefinite**.

Patent No. 9,247,174

6. “receiv[es][ing] a first input via an input device associated with the television”/ “in response to the first input, display[ing][s], via the television, an application panel interface”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“receiv[es][ing] a first input via an input device associated with the television” (’174 Patent, claims 1, 10)	Plain and ordinary meaning	“receiv[es][ing] a user selection via a remote control associated with the television”
“in response to the first input, display[ing][s], via the television, an application panel interface” (’174 Patent, claims 1, 10)	Plain and ordinary meaning	“in response to the user selection, displaying, via the television, an application panel interface”

The dispute as to these claim terms is whether the action is limited to (i) a “user selection” and must be (ii) “via a remote control.”

The parties’ briefing mainly focuses on issue (ii) of whether the input is made via a remote control. Multimedia argues that such a construction would omit embodiments from the specification where the input device is not limited to a remote control, citing “input via various

input devices including, but in no way limited to, video, audio, radio, light, tactile, and combinations thereof.” (’174 Patent, 13:59-14:2.)

LG responds that claims 1 and 10 recite receiving multiple kinds of inputs from an input device for displaying content on a television, including: (a) a “first input via an input device” that causes the TV to display an application panel interface; and (b) “a first *directional* input via the input device” that causes the TV to display a second content panel “based on a first direction associated with the first directional input.” This identification of directional input, according to LG, makes it clear that the input is coming from a user’s remote control having directional selections. As the specification only describes one embodiment of the input device for achieving this functionality, LG submits the claimed “input device” must be a remote control and, specifically, one having directional inputs such as arrow keys or a joystick. (*Id.* at FIGS. 7, 9, 10, and 24:37-25:38.)

Claims 1 and 10 both claim “an input device” that is capable of receiving “a first directional input.” The only mention of “direction” in the specification in relation to a remote control is via a “D-pad 760 (which includes north, east, west, and south directional arrows to navigate among displayed images and/or move between levels of an application's or object's hierarchy such as application view navigation, panel navigation, and collection navigation) ... and/or a moveable joystick 900 on a bottom of the remote control 700.” (’174 Patent, 24:37-25:38.) However, the specification does not limit inputs to only being received from remote controls. In fact, it describes an embodiment where “a user may select a program hotkey, provide a directional input (*e.g.*, up, down, left, right, angles, and combinations thereof), a Swipe input, and/or a hold input to select content.” (*Id.* at 45:8-11.) The swipe functionality is not typically available on the type of traditional remote control as shown in FIGS. 7, 9, and 10, so other forms

of input devices that can provide directional input must also be contemplated. This makes sense because in the same section, the input is described as “may be provided by a user via a remote control *or other input device*.” (*Id.* at 45:15-16) (emphasis added). In general, the specification is broadly open ended as to the types of input devices that may be used with the intelligent TV:

[T]he Intelligent TV 100 can receive input via various input devices including, but in no way limited to, video, audio, radio, light, tactile, and combinations thereof. Among other things, these input devices may be configured to allow the Intelligent TV 100 to see, recognize, and react to user gestures. For instance, a user may talk to the Intelligent TV 100 in a conversational manner. The Intelligent TV 100 may hear and understand voice commands in a manner similar to a smart device's intelligent personal assistant and voice-controlled navigator application (e.g., Apple's Siri, Android's Skyvi, Robin, Iris, and other applications).

(*Id.* at 13:59-14:2.)

Having described various types of input devices, the patentees could easily have limited the claims to a remote control if they had wanted to do so. Accordingly, there is no ambiguity as to the meaning of “first input” or “input device” from a plain reading of the claims. It is not limited to a remote control.

Regarding issue (i) of whether the input must be a “user selection,” such a requirement is not in the claims and the specification is equally broad. While a selection from a user appears as a disclosed embodiment, the patent also describes other options: “Additionally or alternatively, the input may be provided via the Intelligent TV 100 in response to a condition. For example, a timer may be configured to change from video on demand content to a live TV channel on the Intelligent TV 100 at a given time.” (’174 Patent, 45:24-28.) Moreover, “[o]nce the channel is changed, the info tab 1620A may be automatically selected and information may be shown via the application panel 1412. This automatic selection and presentation may be provided by one or more of the components associated with the Intelligent TV 100.” (*Id.* at 45:28-32.) Thus, user action is not required.

The Court therefore finds **these terms should be given their plain and ordinary meaning.**

7. **“receiv[es][ing] a first directional input via the input device associated with the television”/ “determin[es][ing], based on a first direction associated with the first directional input, a second content panel to display via the television in the application panel interface”**

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“receiv[es][ing] a first directional input via the input device associated with the television” (’174 Patent, claims 1, 10)	Plain and ordinary meaning	“receiv[es][ing] a first arrow key selection by a user via the remote control associated with the television”
“determin[es][ing], based on a first direction associated with the first directional input, a second content panel to display via the television in the application panel interface” (’174 Patent, claims 1, 10)	Plain and ordinary meaning	“determining, based on a first direction associated with the first arrow key selection by a user, a second content panel to display via the television in the application panel interface”

The dispute here is similar to the preceding terms with the additional issue of whether the claim construction requires an “arrow key selection” as the directional input.

Multimedia contends that adding the “arrow key” requirement would erroneously restrict a claim to a disclosed embodiment when the “directional input” is not so limited. Multimedia points out that the specification discloses “a directional input (e.g., up, down, left, right, angles, and combinations thereof)” without an explicit restriction to arrow keys. (’174 Patent, 45:7-11.)

LG argues that the only relevant embodiment of the “input device” in the specification is a remote control (shown in FIGS. 7 or 10) containing either “a D-pad” with “directional arrows” or a joystick with “forward and reverse positions.”

As discussed above, the plain language of the claim is not so ambiguous that a person of ordinary skill in the art would not understand the meaning of “directional input” in the context of these claims. Indeed, LG’s proposed construction does not quite capture its own cited embodiment in that a joystick does not typically have arrow keys. In addition, the specification contemplates other types of directional input beyond arrow keys. For example, FIG. 12 is a block diagram of an embodiment of a handheld remote control of either FIG. 7 or 10. (’174 Patent, 12:22-23.) It discloses an “infrared emitter 1228 and receiver” to “show cursor position” and “activate a desired command of the user.” (*Id.* at 29:48-55.) “This can be done by tracking a position of the remote control in relation to infrared tracking reference points (e.g., a sensor bar or infrared LEDs) positioned on or adjacent to the screen of the Intelligent TV 100.” (*Id.* at 29:55-58.) “Motion tracking can further be augmented using position information received from a multi-axis gyroscope and/or accelerometer on board the remote control (not shown).” (*Id.* at 29:58-61.) Accordingly, the patent clearly discloses obtaining directional input through infrared signals, gyroscopes, accelerometers, and motion tracking in addition to arrow keys and joysticks. LG’s construction would read out these embodiments and be improperly limiting.

The Court therefore finds that **these terms should be given their plain and ordinary meaning.**

8. “Panel”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“panel” (’174 Patent, claims 1-4, 10-12)	Plain and ordinary meaning	“a user interface displayed in at least a portion of the display”
“the first content panel is a first type of application panel”	“the first content panel is an application panel”	“the first content user interface displayed is a first type of application user

('174 Patent, claims 1, 10)		interface displayed in at least a portion of the display”
“the second content panel is a second type of application panel” ('174 Patent, claims 1, 10)	“the second content panel is an application panel of a different type than the first application panel”	“the second content user interface displayed is a second type of application user interface displayed in at least a portion of the display”

The central issue in these terms is whether the patentee acted as his own lexicographer in defining the term “panel” to be a “user interface displayed in at least a portion of the display.”

The relevant sentence appears in the '174 Patent as follows: “The term ‘panel,’ as used herein, can mean a user interface displayed in at least a portion of the display.” (7:36-43.) Multimedia argues this is not lexicography because the sentence is written permissively, using the phrase *can mean*, rather than compulsory definitional language. LG disagrees, saying the patentee clearly intended to define the term.

Looking at claim 1 as representative, the claim language describes a method for displaying content on a television where “in response to the first input, displaying, via the television, an application panel interface,” then “providing a first content panel in the application panel interface,” and then “determining . . . a second content panel to display via the television in the application panel interface” In this way, the claim describes the panel as an interface displayed on the television. LG has not pointed to any ambiguity about the meaning of “panel” that requires construction, much less shown why it is helpful to add that the user interface must be “displayed in at least a portion of the display.” Indeed, such an addition is too narrow because claim 3, which depends from claim 1, adds the limitation of “wherein the application panel

interface is provided in a portion of the display of the television.” This is exactly LG’s proposed construction. As independent claim 1 must be broader than its dependent claim 3, LG’s construction cannot be correct. The same is true for claim 10 since dependent claim 12 adds an identical narrowing limitation.

This interpretation comports with LG’s citation from the specification because it is indeed written in a permissive manner. The whole paragraph describing the term “panel,” as used herein, is written permissively in that it “can mean” and “may” have certain characteristics, none of which are expressly limiting.

The Court therefore finds that **the term “panel” should be given its plain and ordinary meaning.** The term “the first content panel is a first type of application panel” means **“the first content panel is an application panel.”** And the term “the second content panel is a second type of application panel” means **“the second content panel is an application panel of a different type than the first application panel.”**

Patent No. 9,055,255

9. “the first portion of the display includes substantially an entire area of a screen of the TV”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“the first portion of the display includes substantially an entire area of a screen of the TV” (claim 1, 10, 19)	Not indefinite	Indefinite

The question here is whether the word “substantially” as used in the disputed claim term renders the claim indefinite. Multimedia argues it is well settled that claim limitations that include the word “substantially” are not indefinite; instead, “ ‘substantial[ly]’ is a ‘meaningful

modifier implying ‘approximate,’ rather than ‘perfect,’ “ and that such modifiers are “descriptive terms commonly used in patent claims to avoid a strict numerical boundary to the specified parameter.” *Julius Zorn, Inc. v. Medi Mfg., Inc.*, 2017 WL 960413 at *5 (S.D. Cal. March 13, 2017) (holding that “substantially inelastic material” was not indefinite) (quoting *Liquid Dynamics Corp. v. Vaughan Co., Inc.*, 355 F.3d 1361, 1368 (Fed. Cir. 2004)). See also *Playtex Products, Inc. v. Proctor & Gamble Co.*, 400 F.3d 901, 907 (Fed. Cir. 2005). Multimedia points to the specification for context on the meaning of this claim term, identifying FIG. 18 (reproduced below) as showing the “active content view area 1808” as “the first portion of the display” that covers substantially an entire area of a screen of the TV.” (’255 Patent, 34:18-20.)

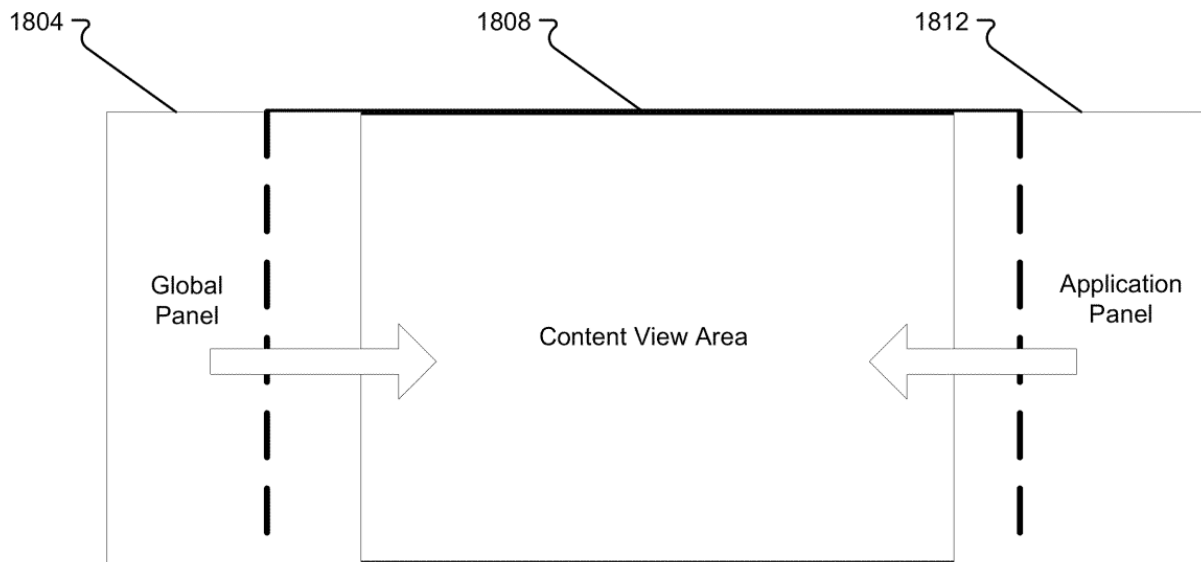


Fig. 18

In response, LG contends the patent fails to provide guidance on what it means for the “first portion” to occupy “substantially an entire area of a screen,” thereby rendering the term indefinite. According to LG, the term “substantially” is a term of degree, and it “necessarily calls

for a comparison against some baseline,” and that the baseline is not found in the claims or patent specification. *Liberty Ammunition, Inc. v. U.S.*, 835 F.3d 1388, 1395–96 (Fed. Cir. 2016); *Seattle Box Co., Inc. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818, 826 (Fed. Cir. 1984) (recognizing that “[d]efiniteness problems often arise when words of degree are used in a claim,” such as “substantially equal to”).

On review of the patent claims, the Court first notes that claims 1, 10, and 19 are not unbounded in scope. Despite LG’s contention, the claims illustrate the various portion’s respective sizes and relationships to each other. In particular, in claim 1, the “first portion of the display includes substantially an entire area of a screen of the TV.” The “second portion of the display overlaps at least a portion of the first portion of the display, . . . includes less than the entire area of the screen of the TV, and [] at least part of the second portion is either transparent or translucent.” And the “third portion of the display overlaps at least a portion of the first portion of the display, . . . includes less than the entire area of the screen of the TV, . . . at least part of the third portion of the display is either transparent or translucent, and [] a first location of the third portion of the display is different from a second location of the second portion of the display.” From the claim language, one can discern that the baseline is the entire area of a screen of the TV. So the modifier “substantially” is in relation to the entire screen, which gives allowance to an area that is less than the entire screen.

Reading claim 1 in the context of FIG. 18 (above) and the corresponding description in the specification provides more information. As illustrated, FIG. 18 shows the Content View Area (the first portion of the display) as taking up the majority of the screen area, whereas the Global Panel and Application Panel are smaller located on either side and shown to be overlapping the Content View Area. The specification further states the “global panel 1804 may

be displayed in such a manner as to not disrupt the content view area 1808.” The “application panel 1812” similarly provides access “without disrupting the content view area 1808.” Both may be “translucent in nature such that the content displayed in the content view area 1808 is displayed (i.e., still viewable to a user).” (’255 Patent, 34:18-65.) Additionally, “[i]n some embodiments, the first portion of the Intelligent TV 100 may be equivalent to an area of the display of the Intelligent TV 100 that is greater than 50% of the total area of the display.” (*Id.* at 59:37-40.)

Post-*Nautilus* cases have indicated that “terms of degree are not inherently indefinite.” *Liberty Ammunition*, 835 F.3d at 1396 (finding the claim term “reduced area of contact” which “necessarily calls for a comparison against some baseline” is not indefinite). What is important, however, is for the claims to “provide objective boundaries for those of skill in the art when read in light of the specification and the prosecution history.” *Id.* (internal citations and quotations omitted). “When a word of degree is used the district court must determine whether the patent's specification provides some standard for measuring that degree. The trial court must decide, that is, whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification.” *Seattle Box*, 731 F.2d at 826.

Here, the claims and specification make clear that the baseline by which the “first portion of the display” is measured against is the entire area of a screen of the TV. This is a defined area. FIG. 18 further illustrates the relative sizes of the three portions of the display, showing that the first portion (the Content View Area) takes up most of the entire area of the screen. In addition, the specification describes the first portion to be “greater than 50% of the total area of the display.” (’255 Patent, 59:37-40.) Accordingly, the plain meaning of the term “substantially an entire area of a screen of the TV” can be understood as the majority of the display or greater than

50% of the display. *See Phillips*, 415 F.3d at 1314 (where the ordinary meaning as understood by a person of skill in the art is “readily apparent even to lay judges,” claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.”). In contrast, LG has submitted no evidence or testimony to show that a person having ordinary skill would be unable to ascertain the scope of the invention. Accordingly, LG has not carried its burden to demonstrate that this term is invalid for indefiniteness by clear and convincing evidence.

The Court therefore finds that this term is **not indefinite and is instead subject to its plain and ordinary meaning where “substantially” means “greater than 50%.”**

Patent No. 9,820,003

10. “determin[ing][e], based on the detected displayed content, [and, by the hardware processor,] a type of content being displayed”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“determin[ing][e], based on the detected displayed content, [and, by the hardware processor,] a type of content being displayed” Patent No. 9,820,003 (claims 1, 9, 17)	Plain and ordinary meaning	“determining, based on the detection of the content already displayed on the intelligent television, and, by the hardware processor, a type of content being displayed”

The dispute regarding this claim term is a temporal one, whether the “type of content being displayed” is based on the content previously displayed or content currently being displayed. The relevant portion of claim 1 reads as follows:

in response to the request, detecting, by the hardware processor, ***the displayed content*** on the intelligent TV;

determining, *based on the detected displayed content*, and, by the hardware processor, a type of content being displayed, wherein the type of content is at least one of an application and a video on demand;

Multimedia contends that the language of claim 1 defines what is “the detected displayed content” such that there is no ambiguity. LG disagrees, stating that according to the order of operations, the determining step cannot take place until after the content is displayed. However, LG does not take into account the next clause showing that the determination is of “a type of content *being* displayed.” When read in full, the claim suggests that the content “being displayed” and the “detected displayed content” are the same thing, which is whatever content is on the TV. The examples in the specification align with this reading. As with live TV “being viewed” and media that is “currently being displayed,” the passage of time in the moment between detecting the displayed content and determining the type of content being displayed happens dynamically. (’003 Patent, 35:51-53 and 37:41-45.) It takes an instant for a computer to make such a detection and determination. Whereas LG’s proposed construction of “content *already displayed*” suggests that much more time has passed and is inconsistent with the claim language of “content being displayed.” The Court therefore rejects LG’s proposal.

Accordingly, the Court finds that **this term should be given its plain and ordinary meaning.**

Patent No. 9,055,254

11. “wherein the user selects the digits from the number input bar using non-numeric keys on the remote control ...”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“A television, comprising:	Not indefinite	The phrase “wherein the user selects the digits from the number input bar using nonnumeric keys on the

... a microprocessor executable application framework configured to: ... receive, from the remote control and using the on screen channel changer, a channel selection of a user based on digits in the number input bar, wherein the user selects the digits from the number input bar using non-numeric keys on the remote control” Patent No. 9,055,254 (claims 8, 14)		remote control” has a plain and ordinary meaning and requires that the user “select[] the digits from the number input bar [of the on screen channel changer] using nonnumeric keys on the remote control.” The claim is indefinite as a hybrid claim
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The parties agree that both claims 8 and 14 are apparatus claims. The dispute, however, is whether the bolded “wherein” phrase is a method requiring a user to perform an action and thereby renders the claims indefinite as being improperly written as a hybrid claim.

Multimedia submits that claims 8 and 14 are not hybrid claims, arguing that the active language in the claims clearly intend to establish the conditions under which the asserted apparatus claims operate, i.e., the “particular capabilities” of the recited framework. In particular, Multimedia states that they are describing “microprocessor executable instructions configured to perform operations comprising” the subsequently listed steps and specifying that what is claimed is the apparatus’ ability to “receive, from the remote control and using the on screen channel changer, a channel selection of a user based on digits in the number input bar.” In this context, according to Multimedia, it is clear that the digits being selected by the user via non-numerical keys would not be viewed by a reasonable person of skill as an attempt to claim the user’s

actions themselves, or to suggest that the patent is infringed at a point other than the moment of configuration.

LG disagrees, asserting that the claims are drafted to require the user to perform a method to practice the claims by making a selection of digits. LG analogizes this claim term to those found indefinite in *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329 (Fed. Cir. 2014), *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005), *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303 (Fed. Cir. 2011), and *E-Watch Inc. v. Apple, Inc.*, No. 2:13- CV-1061-JRG-RSP, 2015 WL 1387947, at *6 (E.D. Tex. Mar. 25, 2015). LG submits that like in *E-Watch*, the apparatus claims here require operation of an input device (selection of digits using keys on a remote control) by the user and are indefinite because the requirement of “user select[ion]” cannot be merely functional language because it requires an active step to be performed by the user.

The law is clear that hybrid claiming is improper. “[A] single claim covering both an apparatus and a method of use of that apparatus” fails to meet the requirements of § 112 when “it is unclear whether infringement ... occurs when one creates a[n infringing] system, or whether infringement occurs when the user actually uses [the system in an infringing manner].” *IPXL*, 430 F.3d at 1384. However, “apparatus claims are not necessarily indefinite for using functional language.” *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008). If an apparatus claim “is clearly limited to a[n apparatus] possessing the recited structure and capable of performing the recited functions,” then the claim is not invalid as indefinite. *Id.* Therefore, the question the Court must answer is whether infringement of the claim occurs when the device is manufactured, in which case it uses permissible functional language to describe the capabilities of the system, or when the device is used.

As a preliminary matter, there is no dispute that claims 8 and 14 are apparatus claims.

Claim 8 recites “A television, comprising: a television screen; ... an infrared and radio frequency module configured to receive wirelessly request from a remote control of a user ... ; and a microprocessor executable application framework.” The microprocessor executable application framework is further “configured to” do various activities including “receive, from the remote control and using the on screen channel changer, a channel selection of a user based on digits in the number input bar, wherein the user selects the digits from the number input bar using non-numeric keys on the remote control.” Claim 8 goes on to recite a remote control that comprises four types of buttons that, when selected, perform various operations.

Thus, the microprocessor’s capability to “receive, from the remote control and using the on screen channel changer, a channel selection of a user based on digits in the number input bar” is the crux of its recited function. The “wherein” clause is included to provide additional information on *how* the channel selection is made. In particular, the channel selection of a user is made “wherein the user selects the digits from the number input bar using non-numeric keys on the remote control.” Read as a whole, the claim is drafted as an apparatus that is “configured to” interact with a user. The focus is on the capabilities of the system rather than on specific actions performed by the user and, accordingly, infringement occurs when the system is built and does not depend on user action.

The same reasoning applies to claim 14, which is directed to “[a] tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed, are *configured to* perform operations comprising . . . instructions to receive, from the remote control, a channel selection based on digits selected by a user using the remote control and the number input bar of the on screen channel changer, wherein the user selects the

digits using non-numeric keys of the remote control” As in claim 8, this claim is drafted as an apparatus configured to interact with a user in a particular way to receive a channel selection. The particular way is defined within the claim and within the “wherein” clause. Here too, the focus is on the capabilities of the system and not on specific actions performed by the user. Infringement of both claims occurs when the system is “configured to” perform these functions and is not dependent upon user action. Therefore, claims 8 and 14 are not hybrid claims.

Accordingly, the Court finds **the claim terms are not indefinite.**

12. “pre-installed [and downloaded] software applications”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“pre-installed [and downloaded] software applications” Patent No. 9,055,254 (claim 1, 10, 19)	Plain and ordinary meaning	“software applications installed [in the television] that cannot be removed by the user or manually updated.”

The issue here is whether the term “pre-installed” is defined in the specification by the patentee acting as his own lexicographer.

LG argues that the specification identifies two categories of software applications, one being “pre-installed” and the other being “downloaded.” LG points to a sentence in the specification that explains the distinction: “Unlike downloaded applications, pre-installed applications cannot be removed by the user or manually updated.” (’254 Patent, 24:18-21.) LG asserts that this is an instance of the inventor acting as his own lexicographer in defining what is a “pre-installed” application. Multimedia disagrees, arguing that the sentence simply discusses an embodiment within the specification, among other embodiments that are not so limiting.

Multimedia asserts it would be improper to import a limitation from the specification into the claim language.

Claims 1 recites “an application center button that, when selected, provides, by the television screen, displayed information regarding pre-installed and downloaded software applications, wherein the downloaded software applications comprise one or more of a web browser, settings control, and content search algorithms.” Thus, the claim language is written to claim two different types of software applications: pre-installed software applications and downloaded software applications. The “downloaded” software applications are further identified as being one or more of a web browser, settings control, and content search algorithms. The “pre-installed” software application is left undefined.

Although the concept of a “pre-installed” and “downloaded” application is well-known to anyone familiar with smartphones, the specification disclosure departs from the common understanding. The specification explains what distinguishes a “pre-installed” software application from a “downloaded” software application is that, “[u]nlike downloaded applications, pre-installed applications cannot be removed by the user or manually updated.” (’254 Patent, 24:17-22.) It goes on to provide examples that “pre-installed applications include web browser, settings control, and content search algorithms.” (*Id.*) This is a significantly narrower concept of what it means for a software application to be “pre-installed” than the conventional understanding, which typically allows for removal of apps and regular system updates.

Thus, the question for the Court to resolve is whether the limiting statement in the specification amounts to a clear definition of the disputed claim term apart from its plain and ordinary meaning and whether the patentee “clearly expressed an intent to redefine the term.”

Kyocera Senco Indus. Tools Inc. v. Int'l Trade Comm'n, 22 F.4th 1369, 1378 (Fed. Cir. 2022) (internal citation omitted).

Reading the claims in context of the specification, the Court is persuaded that the patentee did intend a special definition of “pre-installed” software applications in the limiting manner as set forth in the specification. Indeed, the claims recite two types of software applications, pre-installed and downloaded, which purport to be different things having distinct attributes. Claims 1 and 10 identify examples of downloaded applications, leaving open what is a pre-installed application. Although the term “pre-installed” software application may have a well-known plain and ordinary meaning, the patentee showed his intent to redefine the term by drawing a clear distinction between the two types of software applications in an explicit way. In particular, “[u]nlike downloaded applications, pre-installed applications cannot be removed by the user or manually updated,” which defines both what he means by “downloaded applications” as well as “pre-installed applications.” (’254 Patent, 24:18-21.)

LG’s attempt to point out inconsistencies to this lexicography definition is not persuasive. Although the claims identify the “web browser, settings control, and content search algorithms” as examples of downloaded software applications, this is not contrary to the teachings of the specification, which also identify pre-installed applications as including, for example, “web browser, settings control, and content search algorithms.” (’254 Patent, 24:21-22.) It simply means that web browsers, settings controls, and content search algorithms can be both downloaded and pre-installed. Indeed, the specification says as much by collectively referring to “pre-installed and/or downloaded applications such as application center, media center and Web browser.” (*Id.* at 26:31-37.) Moreover, LG’s argument at the hearing that Multimedia’s proposal would read out an embodiment is likewise not compelling. The embodiment identified by LG at

columns 24:56-25:10 is similarly open-ended in that a “selected (pre-installed or previously downloaded) application . . . can one or more of . . . provide the option to launch, remove, update, and add to favorites the identified application . . .” Under this description, a pre-installed application that cannot be deleted or updated would not have the option to be removed or updated.

Accordingly, the Court finds the term **“pre-installed and downloaded software applications” to mean “pre-installed software applications (that cannot be removed by the user or manually updated) and downloaded software applications.”**

Patent No. 9,578,384

13. “Selection”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“selection” <i>e.g.</i>, in “first selection for a VOD content” / “second selection for a VOD content” / “third selection for a VOD content” / “the selection in the collection view” Patent No. 9,578,384 (claim 1) in “fourth selection of an episode...” Patent No. 9,578,384 (claim 4)	Plain and ordinary meaning	“user selection”

The dispute as to this term is whether the selection must be made by the user. Multimedia argues that LG is inserting unnecessary language into a straightforward claim that has no

identified ambiguity. LG responds that disclosures in the specification confirm that it is the user making the selection. There is a dispute as to who or what is making the selection, that the Court must resolve.

Looking at claims 1 and 4, the language of the claims does not specify or suggest that a user must make the selection. Instead, the method is for “providing video-on-demand (VOD) in an intelligent television” where the processor of the television performs the steps of “receiving” a first/second/third/fourth “selection for a VOD content,” and, in response to such selection, providing a corresponding view of the VOD content. Thus, the method simply receives a selection and performs an action in response, regardless of who or what makes the selection. Therefore, the claim provides no limitations on a user having to make the selection.

Absent a clear and unmistakable disclaimer in the specification or prosecution history, the Court is disinclined to import limitations into the claims. LG has not presented any such evidence here.

Accordingly, the Court finds **the term “selection” should be given its plain and ordinary meaning.**

Patent No. 9,426,527

14. “metadata characteristic”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“the metadata characteristic e.g., in “providing, by the processor, a first view of two or more thumbnails ... based on the metadata characteristic and criteria, ...” Patent No. 9,426,527 (claim 1)	Plain and ordinary meaning In the alternative: “the metadata characteristics”	“the metadata characteristic” is indefinite for lacking a proper antecedent basis. Each claim recites, e.g., (1) “metadata characteristics for two or more items of VOD content” and (2) “the criteria is associated with three or

“the user interface operable to provide a first view of two or more thumbnails ... based on the metadata characteristic and criteria, ...” Patent No. 9,426,527 (claim 7)		more metadata characteristics.” It is indefinite as to what “the metadata characteristic” (singular) refers to.
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The parties dispute whether the singular form of “metadata characteristic” is indefinite for lacking antecedent basis because every other instance of this phrase in each of claims 1 and 7 is written in plural form as “metadata characteristics.”

Multimedia submits that the reference in singular form to “the metadata characteristic” in claims 1 and 7 of the ’527 patent is a drafting error and correcting them to “the metadata characteristics” is not subject to reasonable debate based on the claims and specification. Multimedia points to the instances of the singular “characteristic” being the fifth of six successive references to “metadata characteristics” (plural) in an iterative process, indicating that the plural “characteristics” was intended to serve as antecedent basis for the singular iteration. Multimedia further asserts that the prosecution history supports this reading because two claim amendments revised the singular into plural to overcome prior art, which suggests the applicant inadvertently left the one singular instance in each claim. For these reasons, Multimedia asks the Court to correct the minor typographical error in each of claims 1 and 7 to rewrite “the metadata characteristic” in its plural form.

LG disagrees, arguing that the singular form is not an obvious drafting error and, even if it was, correction would be futile and not save the term from being indefinite. LG argues that if the term was revised to be plural, it would still be indefinite because there are four instances of

“metadata characteristics” in the claim prior to the disputed term, and it is unclear to which of those multiple “metadata characteristics” the disputed term would refer.

Reviewing claims 1 and 7 alongside the specification and prosecution history, the Court is persuaded that the singular use of “metadata characteristic” is an obvious minor clerical error. In particular, the Court notes that besides the one instance of singular form, all other references in claims 1 and 7 are to plural “metadata characteristics.” Taking claim 1 as exemplary, it reads as follows:

1. A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:

receiving, by a processor of the intelligent television, content for two or more items of VOD content;

determining, by the processor, metadata characteristics for the two or more items of VOD content;

creating, by the processor, a file for each item of VOD content;

storing, by the processor, the metadata characteristics with the content in the file in a database for each of the two or more items of VOD content;

receiving, by the processor, a criteria to sort the two or more items of VOD content, *wherein the criteria is associated with three or more metadata characteristics*, wherein the metadata characteristics include one or more of a location at which the content was created, a time at which the content was created, or a genre associated with the content; and

providing, by the processor, a first view of two or more thumbnails associated with each of the sorted two or more items of VOD content *based on the metadata characteristic and criteria*, wherein the first view includes two or more thumbnails associated with the two or more items of VOD content, and wherein the first view is sorted *based on at least three of the metadata characteristics*.

The underlined phrase identifies the term at issue. The bolded phrases all relate to the plural “metadata characteristics” and identify recitation of a “criteria” that is “associated with three or more metadata characteristics.” The third reference to “criteria” is alongside the disputed term.

The claim explains that certain views of thumbnails are sorted “based on the metadata characteristic and criteria.” This assessment refers back to the metadata characteristics associated with the criteria recited earlier, and thereby indicates that “metadata characteristic(s)” is referring to the earlier structure of “three or more metadata characteristics.” Indeed, the claim ends by confirming that the sorting is “based on at least three of the metadata characteristics.” Thus, when reading the claim as a whole, the patentee’s intent to make multiple consistent references to the same three or more “metadata characteristics” is easily understood. Furthermore, all of the references in the specification are to plural “metadata characteristics.” Hence, the drafting error is evident from the face of the patent and there is no lack of antecedent basis.

The intended plural form of “metadata characteristics” is further confirmed by the prosecution history. The applicant first added in an amendment the two instances of “metadata characteristic” in singular form alongside a “criteria” to explain that the criteria is associated with the single metadata characteristic. (*See* Dkt. 62-11.) Then, in a subsequent amendment, the applicant revised the criteria to be associated with “two or more metadata characteristics” and updated one instance of the singular “metadata characteristic” into its plural form while leaving the other as singular. (*See* Dkt. 62-12.) A later amendment associated the criteria with “three or more metadata characteristics.” The drafted claim language, however, is clear in each revision that associating the “criteria” to the plural “metadata characteristic(s)” is the rubric for sorting VOD content. Thus, the applicant appears to have simply overlooked updating both instances of the singular term into the plural. The file history, therefore, supports the conclusion that this term being in singular form is simply a scrivener’s error.

A district court may correct “obvious minor typographical and clerical errors in patents” and does so here to revise the singular use of “metadata characteristic” into the plural “metadata

characteristics.” *Pavo Sols. LLC v. Kingston Tech. Co.*, 35 F.4th 1367, 1373 (Fed. Cir. 2022) (citing *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1357 (Fed. Cir. 2003)). The correction is “not subject to reasonable debate based on consideration of the claim language and the specification,” and “the prosecution history does not suggest a different interpretation of the claims.” *Id.* (internal quotation marks omitted).

Once corrected to the plural form, there is no further issue of indefiniteness of this claim term as LG suggests because all references to “metadata characteristics” are to the same identified structure of three or more metadata characteristics, discussed above. Correction of this clerical error does not affect the scope of the claims.

The Court therefore finds **there is an obvious minor typographical and clerical error as to the term “metadata characteristic” and accordingly revises it to the plural “metadata characteristics,” and further finds this term is not indefinite.**

Patent No. 9,185,325

15. “Selection of the first user interface device”

Claim Phrase	Plaintiff’s Construction	Defendant’s Construction
“selection of the first user interface device” e.g., in “a first selection of the first user interface device” / “a second selection of the first user interface device” Patent No. 9,185,325 (claim 1)	Plain and ordinary meaning	“selection by a user via the first user interface device”

The issue regarding this claim term is similar to that addressed in Term #13, *supra*, about whether to include the requirement that the selection must be made by a user. Multimedia argues for plain and ordinary meaning whereas LG argues that the specification requires the user to make the claimed selection.

Again, the language of claim 1 does not specify or suggest that a user must make the selection. Instead, the claim recites “providing . . . a first user interface device displayed on the display of the intelligent television . . . receiving a first selection of the first user interface device to sort the at least three different items of VOD content of the first catalog view based on a first one of the not watched status, the partially watched status, and the fully watched status, wherein the first user interface device is used to select between the three watched statuses” The claim intentionally leaves open who is making the selection in favor of identifying the “first user interface device” as what receives the selection once it is made. Thus, the claimed method must simply receive a selection and then perform an action in response. It is not otherwise requiring a user to make the selection or limiting the selection to only those that come from a user.

Absent a clear and unmistakable disclaimer in the specification or prosecution history, the Court is disinclined to import limitations into the claims. LG has not presented any such argument or evidence here.

Accordingly, the Court finds **the term “selection of the first user interface device” should be given its plain and ordinary meaning.**

VI. CONCLUSION

The Court adopts the constructions set forth in this opinion for the agreed and disputed terms of the Patents-in-Suit.

The parties are ordered that they may not refer, directly or indirectly, to each other’s claim

construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 30th day of June, 2024.


ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE