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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

OPENTV, INC., et al.,
Plaintiffs,
v.
APPLE, INC.,
Defendant.

Case No. 14-cv-01622-HSG
CLAIM CONSTRUCTION ORDER
Re: Dkt. Nos. 95, 107, 111, 119

Plaintiffs OpenTV, Inc. and Nagravision, S.A. filed this patent infringement action against Defendant Apple, Inc. The parties seek construction of eight claim terms found in three of the asserted patents: Patent Nos. 5,884,033 (“the ’033 Patent”), 7,900,229 (“the ’229 Patent”), and 5,566,287 (“the ’287 Patent”). This order follows claim construction briefing, a technology tutorial, and a claim construction hearing.

I. CLAIM CONSTRUCTION ANALYSIS

A. Legal Standard

Claim construction is a question of law to be determined by the Court. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996). Generally, claim terms should be given their ordinary and customary meaning—*i.e.*, the meaning that the terms would have to a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). There are only two circumstances where a claim is not entitled to its plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

When construing claim terms, the Federal Circuit emphasizes the importance of intrinsic

1 evidence such as the language of the claims themselves, the specification, and the prosecution
2 history. *Phillips*, 415 F.3d at 1312–17. The claim language can “provide substantial guidance as
3 to the meaning of particular claim terms,” both through the context in which the claim terms are
4 used and by considering other claims in the same patent. *Id.* at 1314. The specification is likewise
5 a crucial source of information. Although it is improper to read limitations from the specification
6 into the claims, the specification is “the single best guide to the meaning of a disputed term.” *Id.*
7 at 1315 (“[T]he specification is always highly relevant to the claim construction analysis. Usually,
8 it is dispositive.” (internal quotation marks omitted)); *see also Merck & Co. v. Teva Pharms. USA,*
9 *Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003) (“[C]laims must be construed so as to be consistent
10 with the specification.”).

11 Despite the importance of intrinsic evidence, courts may also consider extrinsic evidence—
12 technical dictionaries, learned treatises, expert and inventor testimony, and the like—to help
13 construe the claims. *Phillips*, 415 F.3d at 1317–18. However, extrinsic evidence is “less
14 significant than the intrinsic record in determining the legally operative meaning of claim
15 language.” *Id.* at 1317 (internal quotation marks omitted).

16 **B. ’033 Patent**

17 The ’033 Patent, titled “Internet Filtering System for Filtering Data Transferred Over the
18 Internet Utilizing Immediate and Deferred Filtering Actions,” claims a system and method that
19 allows users to filter Internet transmissions containing objectionable material. The parties dispute
20 the scope of two claim terms related to the filtering mechanism of the invention.

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1 **1. “filters specifying immediate action” & “filters specifying deferred action”**

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Term	Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
filters specifying immediate action	filters specifying whether to allow or block a transmission immediately and operate between the presentation and application levels of the seven-level ISO protocol model	filters specifying whether transmission of the message should be unconditionally allowed or blocked based on a port number or network address specified in the message
filters specifying deferred action	filters specifying whether to allow or block a transmission conditionally and operate between the presentation and application levels of the seven-level ISO protocol model	filters specifying whether transmission of the message should be allowed or blocked based on information in the message other than a port number or network address

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12 The ’033 Patent claims describe two types of filters that are used to determine whether a
13 transmission should be allowed or blocked: “filters specifying immediate action” and “filters
14 specifying deferred action.” For example, claim 1 describes:

- 15
- 16 1. A method for communicating with servers over the Internet to prevent or allow access to Internet sites, the method comprising computer-implemented steps of:
 - 17 (a) opening a data stream to send a message through an interface to an Internet server;
 - 18 (b) maintaining a database of filtering information comprising a table of filters, said table comprising
 - 19 (1) **filters specifying immediate action**, and
 - 20 (2) **filters specifying deferred action**;
 - 21 (c) comparing information in the message to filtering information in at least one of said **filters specifying immediate action** and said **filters specifying deferred action**; and
 - 22 (d) determining whether to prevent or allow the outgoing transmission of the message based on the comparison.
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25 The parties dispute 1) on what basis the two types of filters are distinguishable and 2)
26 whether the filters operate only “between the presentation and application levels of the seven-level
27 ISO protocol model.”

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i. Distinguishing “immediate action” filters from “deferred action” filters

The parties do not dispute that there must be some distinction between these two types of filters. Based on the ordinary meaning of the claim language, the immediate action filters operate immediately, while the deferred action filters operate on a deferred basis. The specification elaborates upon this distinction and explains that immediate action filters, when triggered, immediately and unconditionally indicate whether a transmission should be allowed or blocked, whereas deferred action filters, when triggered, delay specifying whether to block or allow a transmission until additional conditions are satisfied. The specification gives the following example:

In a preferred embodiment, the system compares an interface port and an IP address to a stored list of ports and addresses. If a match is found, the system can allow the message to be transmitted or block the message prior to transmission [*i.e.*, immediately and unconditionally indicate whether the transmission should be allowed or blocked]. The system can defer the decision whether to allow or block, and then monitor transmissions to search for a particular command and a particular filter pattern [*i.e.*, defer the allow/block decision until additional conditions are satisfied].

’033 Patent 1:41-47. What distinguishes the filters is whether, once the filters are retrieved, the decision to allow or block the transmission is made immediately and unconditionally or delayed until additional conditions are satisfied.

The specification further describes the filters as follows:

Each filter entry in the filter database also has a field for specifying an action to be taken by the client if that filter were retrieved. These actions are essentially divided into two groups, direct action or deferred action. Direct actions indicate that the system should unconditionally allow or unconditionally block the transmission. When filter entries are retrieved, they are first scanned for entries that require direct action; if there are any, these actions are carried out immediately.

Id. at 4:12-20. Additionally, the patentee uses “*i.e.*” to define “immediate action” as “unconditional allowing or blocking.” *Id.* at 4:49-50; *see Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009) (holding that a patentee’s use of “*i.e.*” “signals an intent to define the word to which it refers”).

In the ’033 Patent prosecution history, the patentee distinguished the invention from prior

1 art partly on the basis of the '033 Patent's use of two types of filters. In contrast to the prior art,
2 "[t]he presence of [the deferred action filters that include conditional fields] together with the
3 direct action filters allows the type of highly selective filtering that is characteristic of Applicants'
4 invention." Dkt. No. 107-13 at 8.

5 Defendant contends that the two filters must be distinguished on the basis of the
6 information used by the filters to make the allow/block decision. Defendant argues that
7 "[m]atching a port number or network address . . . is the only characteristic that differentiates
8 filters 'specifying immediate action' from those 'specifying deferred action.'" Dkt. No. 111
9 ("Opp.") at 9. But the specification does not expressly distinguish the filters based on the content
10 of the information used to indicate whether a transmission should be allowed or blocked. Rather,
11 as described above, the specification teaches that the filters differ as to whether they immediately
12 and unconditionally block a transmission once they are triggered, or whether they defer the
13 allow/block decision until additional conditions are satisfied.

14 Indeed, the very example cited in Defendant's opposition brief suggests that Defendant's
15 construction cannot be correct:

16 As an example of blocking an HTTP transmission, assume that the
17 user requests "http://www.domain/test.html." The client transmits
18 the URL request and the domain name server returns an IP address,
19 e.g. 1.2.3.4, corresponding to the domain name. The client tries to
20 open a TCP/IP connection with that IP address and typically with
port 80. If that IP address and port 80 . . . are together in a[n
immediate action filter that specifies unconditional blocking], the
system prevents the data stream from opening.

21 Rather than specifying blocking at this time, a filter can indicate a
22 deferred action. In this example, the filter searches for a GET
23 command as the keyword in an outgoing data stream, and for
24 "test.html" as the filter pattern in the transmission. When the client
sends a transmission with a GET command to get information under
the directory test.html, the host server will respond with data for that
directory. But if there is a blocking filter for test.html, the system
can block the incoming data by discarding it or replacing it.

25 '033 Patent at 6:10-27. In this example, both types of filters are triggered by the user's URL
26 request. The immediate action filter specifies whether to allow or block the transmission
27 immediately and unconditionally based solely on the port number and the IP address returned
28 from the domain name server in response to the URL request. The deferred action filter, also

1 activated by the user’s URL request, defers the allow/block decision until an additional condition
 2 is satisfied—namely, the user’s attempt to retrieve information under the test.html directory. The
 3 additional condition on which the deferred action filter bases its allow/block decision is whether a
 4 given keyword—test.html—matches information contained in the URL address associated with
 5 the user’s request. The Court finds that this example, in which a deferred action filter is triggered
 6 by a user’s URL request and applied using information derived from the directory portion of a
 7 URL address, is not consistent with Defendant’s construction of the deferred action filter as a
 8 “filter specifying whether transmission of the message should be allowed or blocked based on
 9 information in the message other than a port number or network address,” since a URL address is
 10 a type of network address.¹ See Opp. at 8 (noting that “URLs . . . , families of URLs, sites, or
 11 domains” are types of network addresses). A claim construction that is inconsistent with a
 12 preferred embodiment is “rarely, if ever, correct.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d
 13 1576, 1583 (Fed. Cir. 1996).

14 Figure 3 is also instructive. In Box 102, the embodiment depicted by Figure 3 obtains a
 15 list of the IP addresses associated with an opened port. “The system then checks for and *retrieves*
 16 *any filters* that match the particular IP address.” ’033 Patent 4:46-48 (emphasis added). The
 17 system then checks the “retrieved filters” and determines whether any immediate action filters are
 18 triggered; if they are, the decision to allow or block the transmission is made immediately. See
 19 ’033 Patent 4:48-50; Fig. 3, Boxes 106, 108, & 110. If no immediate action must be taken at this
 20 step, “it is determined whether a deferred action must be taken with respect to *any of the retrieved*
 21 *filter[s].*” ’033 Patent at 4:65-67 (emphasis added). This written description of the illustration in
 22 Figure 3 teaches that a deferred action filter may be “retrieved” based on the list of IP addresses
 23 associated with an opened port, after which the system then delays the decision to allow or block
 24

25 ¹ In fact, the specification expressly teaches that a URL may contain a directory, among other
 26 information. See ’033 Patent 2:67-3:10 (“To access a web site, the user enters a uniform resource
 27 locator (URL) request with the form “http://www.name.ext”, where “http://” indicates the
 28 protocol, and “www.name.ext” is a domain name The domain name can also be followed by
 other file names or directories, with the directories separated from the domain name and from
 other directories with slashes that serve as spacer characters. The directories sit below the home
 page, but are individually addressable and accessible.”).

1 the transmission until additional conditions are satisfied. *See* '033 Patent Fig. 3, Box 116; *id.* Fig.
2 4. Thus, the specification does not distinguish the filters on the basis of the content used to make
3 the decision whether to allow or block a transmission, but rather on whether the decision is made
4 immediately and unconditionally, or delayed until additional conditions are satisfied.

5 Defendant's construction is also not consistent with the other '033 Patent claims.
6 Dependent claim six describes "[t]he method of claim 5, wherein the message includes a URL,
7 and step (c) includes comparing a domain name in the URL to filtering information in at least one
8 of said filters specifying immediate action and said filters specifying deferred action." This claim
9 plainly contemplates the application of both types of filters based on the same content: domain
10 names and URLs, which are network addresses. *See also* '033 Patent claim 13 ("The method of
11 claim 5, wherein the message includes a URL, wherein step (c) includes comparing a command in
12 the URL to at least one of said filters specifying immediate action and said filters specifying
13 deferred action."); claim 14 ("The method of claim 6, wherein step (c) include[s] comparing
14 directory information in the URL to the filtering information.").

15 The Court concludes that the specification does not expressly define or limit the two types
16 of filters on the basis of the content used by the filters to specify whether to allow or block a
17 transmission. Indeed, the specification and the claims themselves suggest that both types of filters
18 may base their allow/block decisions at least in part on "network addresses." The Court therefore
19 rejects Defendant's proposed construction.

20 Plaintiffs' construction correctly reflects the distinguishing features of the two types of
21 filters at a high level by construing the immediate action filters as operating "immediately" and the
22 deferred action filters as operating "conditionally." But the Court finds that a more precise
23 construction is both more accurate and more helpful to a jury. Accordingly, the Court finds that
24 "immediate action filters" are "filters that, once they are retrieved, specify whether to allow or
25 block a transmission immediately and unconditionally," and that "deferred action filters" are
26 "filters that, once they are retrieved, defer the specification of whether to allow or block a
27 transmission until additional conditions are satisfied."
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ii. ISO protocol model layer limitation

It is important to consider the prosecution history of a patent when construing claim language, as it often demonstrates “how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips*, 415 F.3d at 1317. “[W]hen the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent, the doctrine of prosecution history disclaimer narrows the meaning of the claim consistent with the scope of the claim surrendered.” *Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1095 (Fed. Cir. 2013).

In the ’033 Patent prosecution history, the applicant explicitly distinguished certain prior art by stating that

[a]s discussed during the interview, the Schwed system and Applicants’ methods operate at different layers of the seven-level ISO communication protocol model . . . [T]he packet filters of Schwed operate between the network interface hardware (level 2) and the network software (level 3). Applicants’ filtering methods, by contrast, operate between the presentation and application levels (layers 6 and 7, respectively) of the seven-level ISO protocol model.

Dkt. No. 107-13 at 7.

Defendant seems to argue that this statement cannot constitute an unequivocal and unambiguous disclaimer because the patentee also distinguished the Schwed prior art by amending the ’033 Patent to require two types of filters instead of just one. However, the Court sees no reason a patentee cannot distinguish prior art on two independent grounds, and Defendant does not cite to any authority to the contrary. Similarly, Defendant also argues that there was no clear and unmistakable disavowal during prosecution because the patentee did not amend the claims to require that the filters operate at layers six and seven of the ISO protocol model. Of course, if a patentee were required to amend his claims in order to limit their scope, there would be no need to examine the prosecution history for clear and unmistakable disavowals in the first place. The Court finds these arguments unpersuasive.

Finally, Defendant argues that Plaintiffs’ construction must be incorrect because it would exclude preferred embodiments described in the specification. Defendant contends that it is “nonsensical” to filter messages on the basis of an IP address, for example, at the application or

1 presentation layer, because such filter could only operate at layer 3 (network layer). Opp. at 10.
2 The parties’ experts disagree on this issue. See Dkt. Nos. 113, 119-2. The Court finds that
3 Plaintiffs’ construction does not render the claims nonsensical. Defendant admitted at the
4 technology tutorial that “[a]ll of the information . . . is available” at each layer of the model. Hr’g
5 Tr. at 53 (“It’s not like the information that is in the data is now not accessible at that layer. It is.
6 It’s just that the reason it’s considered a header or the reason we refer to information that’s added
7 at that layer as a header is because that’s information that that layer of the protocol has decided
8 I’m responsible—for example, at the IP layer, I’m responsible for making sure this message gets
9 to the intended destination.”).

10 The Court finds that the ’033 Patent prosecution history disclaimer that the filters operate
11 only between layers six and seven of the seven-level ISO protocol model is “clear and
12 unmistakable.” *Biogen*, 713 F.3d at 1096. Therefore, these terms must be construed in light of
13 that disclaimer.

14 * * *

15 The Court construes the “immediate action filter” claim phrase as “filters that, once they
16 are retrieved, specify whether to allow or block a transmission immediately and unconditionally
17 and operate between the presentation and application levels of the seven-level ISO protocol
18 model” and the “deferred action filter” claim phrase as “filters that, once they are retrieved, defer
19 the specification of whether to allow or block a transmission until additional conditions are
20 satisfied and operate between the presentation and application levels of the seven-level ISO
21 protocol model.”

22 **C. ’229 Patent**

23 The ’229 Patent, titled “Convergence of Interactive Television and Wireless
24 Technologies,” describes “a system and method for utilizing user profiles in an interactive
25 television system.” Essentially, the invention tracks user activity within the system and stores that
26 information in a user profile. The user profile is then used to customize data sent to or retrieved
27 by the user.

28 Defendant argues that the entire ’229 Patent is invalid because the terms “activity related to

1 television viewing” and “activity unrelated to television viewing,” on which all of the claims
2 depend, are indefinite. The parties further dispute the scope of two components of the system: the
3 “set-top box” and the “broadcast station.”

4 **1. “activity [related / unrelated] to television viewing”**

5

6 Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
7 activity [related / unrelated] to watching television programming	indefinite

8 The ’229 Patent uses this term in each of its independent claims to describe the types of
9 user activity information collected and assembled by the different components of the system. For
10 example, claim 1 describes:

11 1. A method for utilizing a user profile in an interactive television
12 system, the method comprising:

13 updating a user profile responsive to a first user activity, the first
user activity being initiated via a first device;

14 initiating a second user activity, the second user activity being
15 initiated via a second device which is different from the first device,
wherein either

- 16 (i) the first user activity is **related to television viewing**
and the second user activity is **unrelated to television**
17 **viewing**, or
(ii) the first user activity is **unrelated to television viewing**
and the second user activity is **related to television**
18 **viewing**;

19 accessing the user profile in response to the second user activity;
20 and

21 transmitting data to a user responsive to the second user activity,
22 wherein the transmitted data is based at least in part on the user
profile, and wherein the first user activity affects a content of said
23 data transmitted to the user responsive to the second user activity.

24 The Supreme Court recently clarified the standard courts must use to determine whether
25 patent claims are invalid for indefiniteness under § 112 of the Patent Act. In *Nautilus, Inc. v.*
26 *Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014), the Supreme Court held “that a patent is invalid
27 for indefiniteness if its claims, read in light of the specification delineating the patent, and the
28 prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the

1 scope of the invention.” 134 S. Ct. at 2124. That definiteness standard “mandates clarity, while
2 recognizing that absolute precision is unattainable.” *Id.* at 2129. The Federal Circuit has since
3 interpreted the *Nautilus* holding to require that the intrinsic evidence “provide objective
4 boundaries” on the scope of the claim meaning. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d
5 1364, 1371 (2014).

6 Defendant argues that “activity [unrelated / related] to television viewing” is indefinite
7 because the intrinsic evidence does not provide objective distinctions between the two types of
8 activities, and therefore the infringement determination is left to subjective opinion. But the cases
9 cited by Defendant dealt with “purely subjective” claim phrases. *Datamize, LLC v. Plumtree*
10 *Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005) (holding that the phrase “aesthetically
11 pleasing” was indefinite because the scope of that phrase’s meaning “depend[s] solely on the
12 unrestrained, subjective opinion of a particular individual purportedly practicing the invention”);
13 *see also Interval Licensing*, 766 F.3d at 1374 (holding that the term “in an unobtrusive manner”
14 did not satisfy the *Nautilus* standard because it “is highly subjective” and the intrinsic evidence did
15 not provide an “objective boundary” on its scope). Unlike the terms at issue in *Datamize* or
16 *Interval Licensing*, the “television viewing” terms contain an inherent objective distinction
17 between the two types of activities: whether or not a given activity is related to television viewing
18 is a determination that can be made without resort to subjective opinion.

19 Whatever ambiguity may be introduced by the language of the claims is clarified by the
20 prosecution history. These terms were added during prosecution to distinguish the invention
21 described by the ’229 Patent from prior art that did not teach or suggest “that a television program
22 guide and any number of non-program-guide applications may share a common user profile,
23 exchange data, or affect each other’s operation in any way.” Dkt. No. 107-21, at
24 OPENTV0002726. In other words, the ’229 Patent improved upon the prior art by allowing an
25 interactive television system to incorporate user activity information gleaned from activities not
26 related to the actual viewing of television into a user profile also populated with information
27 sourced from activities related to television viewing. The prosecution history contains several
28 examples of activities related to television viewing and disclosed by the prior art, such as remotely

1 accessing program listings, scheduling program reminders, adjusting parental control settings,
 2 accessing interactive television program guide functionality related to preferences or “favorites”
 3 settings, and scheduling recordings of television programs. *Id.* at OPENTV0002724-25. These
 4 examples suffice to “inform, with reasonable certainty, those skilled in the art about the scope of
 5 the invention.” *Nautilus*, 134 S. Ct. at 2124; *see also Interval Licensing*, 766 F.3d at 1373 (“[A]
 6 patent which defines a claim phrase through examples may satisfy the definiteness requirement.”);
 7 *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1335 (Fed. Cir. 2010) (finding that claim
 8 phrase “not interfering substantially” was not indefinite because the prosecution history listed
 9 eight specific examples of things that did not interfere substantially). That some gray area
 10 regarding the scope of these terms may remain does not doom them as indefinite; as *Nautilus*
 11 recognizes, “absolute precision is unattainable.” 134 S. Ct. at 2129.²

12 Plaintiff argues that its construction reflects that the user activities contemplated by the
 13 ’229 Patent relate to watching television *programming* rather than generically viewing a physical
 14 television—theoretically, a television could be used to engage in activities unrelated to watching
 15 television programming, such as browsing the internet. The Court agrees that the intrinsic
 16 evidence supports Plaintiff’s construction and accordingly adopts it.

17 **2. “set-top box”**

OpenTV Proposed Construction	Apple Proposed Construction
a device that receives a programming signal and outputs audio and video signals for presentation on display	device that decodes and tunes television signals

23 ² Plaintiff also asserts that Defendant waived its indefiniteness argument by failing to allege that
 24 the ’229 Patent is invalid as indefinite in its invalidity contentions. The Court finds this argument
 25 meritless. In its invalidity contentions, Defendant identified “grounds of invalidity [of the ’229
 26 Patent] based on (1) lack of written description . . . (2) lack of enablement . . . and (3)
 27 indefiniteness under 35 U.S.C. § 112, second paragraph.” Dkt. No. 107-24 at 55. Defendant then
 28 stated that “[t]o the extent the following limitations are even definite (under 35 U.S.C. § 112,
 second paragraph), the ’229 Patent fails to sufficiently describe them,” and listed the “activity
 [unrelated / related] to television viewing” term. *Id.* In all of its subsequent representations to
 Plaintiff, Defendant asserted its indefiniteness argument regarding this term. The Court finds that
 Defendant provided more than adequate notice to Plaintiff of its contention that this term is invalid
 as indefinite, and therefore did not waive this argument.

1 This term describes a component of the claimed invention that may be used to conduct and
2 transmit user activity, and store a user profile based on that activity. *See* '229 Patent claims 6, 11,
3 14.

4 Defendant limits the term “set-top box” to a device that is capable of “decod[ing] and
5 tun[ing] television signals” based on the specification’s disclosure that the set-top box may receive
6 “television programming” signals. *See* '229 Patent at 6:44-45. But the words “decode” and
7 “tune” do not appear anywhere in the specification. Furthermore, the specification also discloses
8 that signals sent and received by the set-top box “may encompass a wide variety of data
9 exchanges,” *including* “analog or digital signals,” “signals for high-definition television,” and
10 “internet communications.” *Id.* at 6:42-52. Defendant’s construction suggests that the set-top box
11 must be capable of decoding and tuning television signals. There is no indication in the
12 specification that the invention excludes set-top boxes that are not capable of processing such
13 signals, and the Court declines to read such a limitation into the patent. Plaintiffs’ construction, on
14 the other hand, properly encompasses all of the data exchanges disclosed by the specification.

15 Defendant further argues that Plaintiffs’ construction fails to distinguish between set-top
16 boxes and the “remote units” also included in the system, because cell phones and laptops, which
17 are embodiments of the remote units, are equally capable of receiving a programming signal and
18 outputting audio and video signals for presentation on a display. However, nothing in the '229
19 Patent indicates that the set-top box and the remote unit cannot be embodied by two of the same
20 type of device—*e.g.*, two different laptop computers. The Court finds that the intrinsic evidence
21 does not require these two components to be embodied by mutually exclusive devices.

22 The Court adopts Plaintiffs’ proposed construction, as it best reflects the meaning of this
23 term in light of the intrinsic evidence.

24 **3. “broadcast station”**

OpenTV Proposed Construction	Apple Proposed Construction
station configured to deliver programming to multiple devices	station configured to deliver programming to all network destinations simultaneously

1 This term describes a component of the claimed invention that may be used to store the
2 user profile and “convey a programming signal to the set-top box.” *See* ’229 Patent claims 11, 14.

3 The specification discloses that content transmitted by the broadcast station within the
4 system “may be ‘pushed’ to the mobile unit (i.e. sent without a user request) or ‘pulled’ (sent to
5 the mobile unit based on a user request or other action).” *Id.* at 2:54-56. Thus, the broadcast
6 station must be capable of delivering content on an individualized basis, in response to a “pull”
7 request. Similarly, the specification describes embodiments by which the broadcast system allows
8 users to send and receive e-mails, which likewise would need to be transmitted on an
9 individualized basis. *Id.* at 6:50-51.

10 On its face, Defendant’s construction does not allow for the individualized transmission of
11 data contemplated by the specification. Defendant argues that the “pull” data requests could be
12 accomplished by transmitting a generic signal to all users and filtering that transmission
13 individually upon receipt. There is no support in the specification for such a filtering method; that
14 the invention *could* be embodied in this way of course does not mean that the Court should limit it
15 to this embodiment, particularly when it is not described anywhere in the specification.

16 Defendant further argues that its construction encompasses broadcast stations that deliver
17 programming separately to multiple users, so long as the broadcast station is capable of also
18 delivering programming simultaneously to all users. But Defendant’s construction therefore
19 excludes broadcast stations that *only* deliver programming on an individualized basis to multiple
20 devices. The specification provides no support for such an interpretation.

21 The Court adopts Plaintiffs’ proposed construction, as it best reflects the meaning of this
22 term in light of the intrinsic evidence.

23 **D. ’287 Patent**

24 The ’287 Patent, titled “Method for Asynchronously Maintaining an Image on a Display
25 Device,” claims a method that “optimize[s] the perceived response of [an] application program”
26 by separating “screen updates” from “graphic object attribute changes.” ’287 Patent 9:47-53.
27 Essentially, the invention allows an application program to store and optimize a series of graphic
28 object attribute changes before actually implementing those changes by redrawing the graphic

1 objects on the screen. By separating the latter function, which uses a large amount of processing
2 power, from the former, the invention can be used to improve the user’s perceived response of the
3 application program. *See id.* at 9:33-37.

4 The independent method claim describes:

- 5 1. In a processing system executing an application program
6 displaying a plurality of graphic objects, a method for
7 asynchronously maintaining an image on a display device,
8 comprising the steps of:

9 receiving a **drawing request** from the application program;

10 determining a drawing area of the image in response to the
11 received **drawing request**;

12 inserting a new entry representing the drawing area into a list
13 of a plurality of entries each representing respective drawing
14 areas;

15 receiving an **image update request** from the application
16 program;

17 retrieving one of the plurality of entries representing drawing
18 areas from the list; and

19 **requesting that respective graphic objects be redrawn if
20 any portion of the graphic object lies within the drawing
21 area represented by the retrieved entry.**

22 The parties dispute the meaning of the three bolded claim phrases in the six-step method
23 described by the independent claim.

24 **1. “drawing request”**

OpenTV Proposed Construction	Apple Proposed Construction
a request to draw one or more graphic objects on the display device	notification that an attribute of a graphical object has changed

25 This term describes the initial communication from the application program to the
26 processing system that implements the claimed method.

27 As a threshold matter, Defendant argues that the specification describes a single
28 embodiment as the invention, and therefore, the claims must be construed to reflect the scope of
that described embodiment. The specification describes Figure 1 as “a diagram . . . illustrating the
operation of a processing system incorporating the present invention.” ’287 Patent 2:26-28, 2:41-

1 43. Unlike the patents at issue in the cases cited by Defendant, the '287 Patent does not say that
 2 the Figure 1 embodiment *is* the present invention. *See Lydall Thermal/Acoustical, Inc. v. Federal-*
 3 *Mogul Corp.*, 344 F. App'x 607, 614 (Fed. Cir. 2009) (“The specification identifies a three-
 4 layered batt as ‘the present invention.’”); *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503
 5 F.3d 1295, 1308 (Fed. Cir. 2007) (holding that claim must be construed in light of limitation
 6 contained in specification’s description of “the present invention”); *see also Honeywell Int’l, Inc.*
 7 *v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006) (“On at least four occasions, the written
 8 description refers to the [disputed term] as ‘this invention’ or ‘the present invention.’”). And the
 9 mere fact that the specification discloses only a single embodiment does not mandate that the
 10 claims be limited to that embodiment. *See Phillips*, 415 F.3d at 1323 (“[W]e have expressly
 11 rejected the contention that if a patent describes only a single embodiment, the claims of the patent
 12 must be construed as being limited to that embodiment. That is not just because section 112 of the
 13 Patent Act requires that the claims themselves set forth the limits of the patent grant, but also
 14 because persons of ordinary skill in the art rarely would confine their definitions of terms to the
 15 exact representations depicted in the embodiments.”). The Court finds that the specification does
 16 not explicitly limit the claims to the embodiment depicted in Figure 1.

17 Even if the Court were to limit the scope of the “drawing request” term to that illustrated
 18 by the embodiment depicted in Figure 1, Defendant’s construction would be problematic. The
 19 plain language of the claim term and the detailed description of the specification mandate that a
 20 “drawing request” be construed as a “request,” rather than a “notification.” The claims
 21 consistently describe this step of the method as a “request,” and the term “notification” does not
 22 appear anywhere in the claims or the specification. *See* '287 Patent claims 1 (“receiving a
 23 drawing *request* from the application program”), 5 (“the step of receiving a drawing *request*
 24 comprises the step of receiving a *request* to draw a graphic object on the image”), and 7 (“the step
 25 of receiving a drawing *request* comprises the step of receiving a *request* to move a graphic object
 26 on the image”); *see also id.* 3:19-23 (referring to Figure 1 and teaching that an “application
 27 program interface (API) is provided to an application programmer, in a known manner, to permit a
 28 *request* for [a change to the attribute of a graphic object]”). Defendant’s only argument in support

1 of its construction of the term as a “notification” is that “[t]he arrow connecting boxes 302 and
2 342 in Figure 1 demonstrates that the application notifies the display manager whenever a graphic
3 attribute changes.” Opp. at 21. The Court is not persuaded that an arrow necessarily symbolizes a
4 “notification” rather than a “request.” Accordingly, the Court construes a “drawing request” as a
5 request, not a notification.

6 Exactly what is being requested by the drawing request is another matter. While Plaintiffs
7 argue that the plain language of the claims and the specification support its construction that it is a
8 request to “draw,” the intrinsic evidence makes clear that no actual drawing occurs as a result of
9 the drawing request. See ’287 Patent 5:18-19 (“The screen is not redrawn at this point.”). Indeed,
10 actually drawing graphic objects in response to a drawing request would defeat the very purpose
11 of the invention, which is to “mak[e] screen updates asynchronous from graphic object attribute
12 changes.” ’287 Patent 9:47-48. The Court therefore finds that Plaintiffs’ construction is not
13 tenable in light of the intrinsic evidence.

14 Plaintiffs argue that Defendant’s construction is likewise untenable because it would
15 exclude certain types of drawing requests, such as those directing that a new graphic object be
16 created or that an existing graphic object be refreshed. Neither the specification nor the claims
17 contemplate the “refreshing” of graphic objects. That aside, both the creation of a new graphic
18 object and the refreshing of an existing graphic object would involve changes to attributes of at
19 least one graphic object on the display device: the screen, on top of which all other graphic objects
20 are layered. As such, construing the term “drawing” as “changing an attribute of a graphic object”
21 best reflects what action is being requested by a drawing request.

22 The Court finds that the “drawing request” term, read in light of the intrinsic evidence,
23 should be construed to mean “a request to change an attribute of a graphic object.”

24 **2. “image update request”**

25

OpenTV Proposed Construction	Apple Proposed Construction
a request to redraw one or more graphic objects on the display device	instruction to initiate a screen redraw

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28 While the “drawing request” in step one of the claimed method initiates the storage and

1 optimization of graphic attribute changes, the “image update request” in the fourth step initiates
2 the process by which the optimized graphic object attribute changes are actually redrawn.

3 For the same reasons articulated above, the Court construes the image update request as a
4 “request” rather than an “instruction.” Both the claims and the specification consistently describe
5 this term as a request; the word “instruction” does not appear anywhere in the Patent. The Court
6 finds that Defendant points to no persuasive evidence that would justify construing this term as an
7 instruction. Accordingly, the Court construes the “image update request” as a request.

8 Considered in light of the specification and the other steps that comprise the claimed
9 method, neither of the parties’ proposed constructions adequately reflects what action is being
10 requested by the “image update request.” The last three steps of the method are: 1) receive an
11 image update request from the application program; 2) retrieve one of the drawing area entries
12 from the stored list; and 3) request that graphic objects be redrawn if so indicated by the retrieved
13 entries. If the “image update request” were a “request to redraw,” as argued by Plaintiffs, then the
14 last step of the claimed method would be redundant (“requesting that respective graphic objects be
15 redrawn”). Similarly, Defendant’s construction that the image update request “initiate[s] a screen
16 redraw” is not entirely accurate, as the actual redraw is not initiated until the last step of the
17 claimed method. Rather, the image update request is exactly as it sounds: a request from the
18 application program to update the image on the display device, which update is then accomplished
19 by retrieving the drawing area entries and redrawing the graphic objects as indicated.

20 Accordingly, the Court construes the “image update request” term as “a request to update
21 the image on the display device.”

22 **3. “requesting that respective graphic objects be redrawn if any portion of the**
23 **graphic object lies within the drawing area represented by the retrieved**
24 **entry”**

OpenTV Proposed Construction	Apple Proposed Construction
plain and ordinary meaning	commanding every object that overlaps the drawing area represented by the retrieved entry to call low level graphics routines to redraw itself

1 This term describes the last step of the claimed method, whereby the graphic objects are
2 actually drawn on the display device.

3 For the same reasons articulated above, the Court construes this step of the method as a
4 “request” rather than a “command.” Both the claims and the specification consistently describe
5 this term as a request; the word “command” does not appear anywhere in the Patent. The Court
6 finds that Defendant points to no persuasive evidence that would justify construing this term as an
7 command and accordingly construes this step as a request.

8 Although claim terms are usually given their plain and ordinary meaning, an exception
9 exists where “the patentee acted as his own lexicographer and clearly set forth a definition of the
10 disputed claim term in either the specification or prosecution history.” *CCS Fitness, Inc. v.*
11 *Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). The use of “*i.e.*” in the specification
12 “signals an intent to define the word to which it refers.” *Edwards*, 582 F.3d at 1334; *see also*
13 *Abbott Labs. v. Novopharm Ltd.*, 323 F.3d 1324, 1330 (Fed. Cir. 2003) (holding that the district
14 court “did not err by reading the patentee’s definition from the specification into the claim” where
15 the patentee “explicitly defined” a term by preceding the term with “*i.e.*” in the specification).
16 However, the plain definitional meaning of “*i.e.*” will not carry the day where such a reading
17 would exclude a preferred embodiment from the claim’s scope, or where a “contextual analysis”
18 of the patent indicates that “*i.e.*” is used in an exemplary rather than definitional way. *See*
19 *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1326 (Fed. Cir. 2012). Defendant argues that the ‘287
20 patentee acted as his own lexicographer by expressly defining the term “redraw” as “calling low
21 level graphics routines to redraw.” Plaintiffs contend that no construction is necessary, and that
22 Defendant’s construction improperly imports limitations from the specification.

23 The ‘287 Patent consistently and repeatedly makes clear that the verb “redraw,” in the
24 context of the patent and as used in this sixth step of the claimed method, means “call low level
25 graphics routines to draw a graphic object”:

- 26
- 27 • “The REDRAW method first determines if any portion of the
28 graphic object lies within the boundary box. If so, then that graphic object **calls low-level graphic display routines which will redraw that graphic object. Otherwise, nothing is done.**” ‘287 Patent at 5:40-44.

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- “The REDRAW method for an object first determines if any portion of [the] graphic image representing that object lies within the boundary box (from box 346 of FIG. 1). If so, the REDRAW method **calls the low level graphic routines which draw the object represented by that node on the display screen according to the attributes of that graphic object.**” *Id.* at 6:17-23.
- “For example, to draw a box object, **low level graphic routines are called** which will draw a box at the position specified by the position attribute of the box object” *Id.* at 6:24-26.
- “As another example, to draw a text object, **low level graphic routines are called** which will draw the image of the characters in the string attribute at the position specified in the position attribute having the size specified in the size attribute.” *Id.* at 6:30-33.
- “The REDRAW method of the screen object 10 first determines from its graphic attributes if any portion lies within the boundary box. In this case, it does not, so **no low level graphic routines are called.**” *Id.* at 6:65-7:2.
- “Because the time text object 24 does lie within the boundary box, **low level routines are called** to draw the time text object, according to its attributes. **I.e.** the characters representing the new time are drawn on the image.” *Id.* at 7:25-27.
- “The lower right-hand corner of the surrounding box object 31 lies within the boundary box, so it is redrawn (**i.e. low level graphic routines are called**).” *Id.* at 7:44-46.
- “The screen background lies within the OLD rectangle, so it is redrawn (**i.e. low level graphic routines are called**) by the REDRAW method for the screen object 10 as described above.” *Id.* at 8:47-51.

Contrary to Plaintiffs’ argument, this is not the “mere use of ‘i.e.’” Dkt. No. 119 (“Reply”) at 15. Rather, the patentee acted as his own lexicographer and explicitly defined the term “redraw” as “call low level graphics routines.” The use of “i.e.” in the context of the ‘287 Patent is analogous to its use in the patent at issue in *Abbott*, where the court was tasked with construing the term “co-micronization of fenofibrate and a solid surfactant.” 323 F.3d at 1330. The district court construed that phrase as the micronization of fenofibrate and solid surfactant “in the absence of other excipients,” based on the patentee’s use of “i.e.” to “explicitly define[]” the phrase as “micronization of an intimate mixture of fenofibrate and a solid surfactant.” *Id.* Likewise, here,

1 the '287 patentee has used "*i.e.*" to explicitly define "redraw" as "call low level graphics routines."
2 Furthermore, the patentee uses that definition throughout the specification, with and without "*i.e.*"
3 as a preceding term, to describe the mechanism of this sixth step of the claimed method.

4 In *Dealertrack and Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358 (Fed. Cir. 2012), the
5 Federal Circuit held that a patentee's use of "*i.e.*" in the specification did not indicate an intent to
6 expressly define a term. But considered in context, the patentees in those cases used "*i.e.*"
7 differently than the phrase is used in the '287 Patent. In *Toshiba*, the Federal Circuit's holding
8 turned on the fact that the patentee used "*i.e.*" to explain the meaning of a claim term within the
9 specific context of one example of the embodied invention. 681 F.3d at 1370. The court held that
10 "[i]t does not follow" that such definition should be imputed to the claim term "in all instances"
11 based on that limited definition. *Id.* Here, in contrast, the patentee did not limit the definition of
12 "redraw" to a particular example. Rather, "redraw" is defined as "call low level graphic routines"
13 both in the abstract and in the specific context of all examples described in the specification.

14 In *Dealertrack*, the Federal Circuit held that "[t]he only way that the 'i.e.' in this patent
15 could be read definitionally is if it excluded from the claim scope [several] embodiments discussed
16 throughout the claim." 674 F.3d at 1326. In contrast, reading "*i.e.*" definitionally in the '287
17 Patent would not exclude any described embodiments from the claim's scope. Furthermore, the
18 *Dealertrack* court held that "the most natural reading of the 'i.e.' here is as citing examples, which
19 . . . is the way it was used throughout the specification in other contexts." *Id.* In the '287 Patent,
20 by contrast, "*i.e.*" is consistently used definitionally, and the patentee used "*e.g.*" or "for example"
21 when he wished to list examples of a concept rather than define a particular term. *See* '287 Patent
22 5:9-11 (using "*i.e.*" to define "the position attribute of a graphic object is changed" as "the graphic
23 object is moved from one place to another"), 1:50-52 (using "*e.g.*" to identify "responding to user
24 inputs" as an example of "other processing functions [that] may be more important in increasing
25 the perceived response speed than the screen drawing function").

26 The Court finds that this claim phrase should be construed as "requesting that respective
27 graphic objects call low level graphics routines to redraw themselves if any portion of the graphic
28 object lies within the drawing area represented by the retrieved entry."

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II. CONCLUSION

The Court construes the disputed terms as follows:

Term	Asserted Claims	Construction
'033 Patent		
filters specifying immediate action	1, 15, 23	filters that, once they are retrieved, specify whether to allow or block a transmission immediately and unconditionally and operate between the presentation and application levels of the seven-level ISO protocol model
filters specifying deferred action	1, 15, 23	filters that, once they are retrieved, defer the specification of whether to allow or block a transmission until additional conditions are satisfied and operate between the presentation and application levels of the seven-level ISO protocol model
'229 Patent		
set-top box	6, 11, 14, 16, 18, 20, 21, 27	a device that receives a programming signal and outputs audio and video signals for presentation on display
broadcast station	11, 14, 18	station configured to deliver programming to multiple devices
activity [related/unrelated] to television viewing	1, 5, 9, 14, 26	activity [related / unrelated] to watching television programming
'287 Patent		
drawing request	1, 5, 7	a request to change an attribute of a graphic object
image update request	1, 16	a request to update the image on the display device
requesting that respective graphic objects be redrawn if any portion of the graphic object lies within the drawing area represented by the retrieved entry	1	requesting that respective graphic objects call low level graphics routines to redraw themselves if any portion of the graphic object lies within the drawing area represented by the retrieved entry

IT IS SO ORDERED.

Dated: June 5, 2015


 HAYWOOD S. GILLIAM, JR.
 United States District Judge