

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

GENBAND USA LLC,

§

v.

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CASE NO. 2:14-CV-33-JRG-RSP

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METASWITCH NETWORKS LTD., et al.

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SUPPLEMENTAL CLAIM CONSTRUCTION
MEMORANDUM AND ORDER

On February 19, 2015, the Court held a hearing to determine the proper construction of certain disputed claim terms in United States Patents No. 6,772,210; 6,791,971; 6,885,658; 6,934,279; 7,047,561; 7,184,427; 7,990,984; and 7,995,589. After considering the arguments made by the parties at the hearing and in the parties' claim construction briefing (Dkt. Nos. 108, 118, and 121),¹ the Court issued a Claim Construction Memorandum and Order on April 2, 2015. Dkt. No. 135.

The parties submitted additional disputed terms for construction. *See* Dkt. No. 138, Apr. 17, 2015 Joint Statement of Remaining Terms to Be Construed.

On July 16, 2015, the Court held a hearing to determine the proper construction of remaining disputed terms. After considering the arguments made by the parties at the hearing and in the parties' supplemental claim construction briefing (Dkt. Nos. 248 and 270), the Court issues this Supplemental Claim Construction Memorandum and Order.

¹ Citations to documents (such as the parties' briefs and exhibits) in this Claim Construction Memorandum and Order refer to the page numbers of the original documents rather than the page numbers assigned by the Court's electronic docket unless otherwise indicated.

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I. BACKGROUND

Plaintiff brings suit alleging infringement of United States Patents No. 6,772,210; 6,791,971; 6,885,658 (“the ’658 Patent”); 6,934,279 (“the ’279 Patent”); 7,047,561 (“the ’561 Patent”); 7,184,427 (“the ’427 Patent”); 7,990,984 (“the ’984 Patent”); and 7,995,589 (“the ’589 Patent”) (collectively, the “patents-in-suit”). In general, the patents-in-suit relate to telecommunications.

The Court herein addresses the patents-in-suit in the groupings used by the parties in their supplemental claim construction briefing.

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with preliminary constructions for the disputed terms with the aim of focusing the parties’ arguments and facilitating discussion as to those terms. Those preliminary constructions are set forth below within the discussion for each term.

Finally, Defendants have submitted an appendix of “Representative Claim Terms,” and Defendants “contend[] that these remaining terms should be given the constructions proposed by [Defendants] for the same reasons as their corresponding representative terms, which have already been construed by the Court. Should the Court deem that these terms require no construction in view of the existing Markman Order (Dkt. No. 135) or a construction consistent with the Court’s construction of representative terms in that Order, [Defendants] respectfully request[] a ruling on the record to reflect the Court’s finding.” Dkt. No. 248 at 17; *see id.* at App’x A.

The Court has received two rounds of claim construction briefing and conducted two claim construction hearings in the present case, and the parties chose not to present briefing on the terms that Defendants present in their Appendix A. *See id.*; *see also* Dkt. Nos. 108, 118, 121,

129, 248, 270 & 274. Because these terms have not been briefed by the parties, the disputes between the parties, if any, have not been presented such that the Court can meaningfully render any rulings. Accordingly, the Court declines to speculate as what arguments the parties might have presented had the parties chosen to present argument.

II. LEGAL PRINCIPLES

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips 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)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See id.* at 1313; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *accord Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim’s meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For

example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); accord *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor’s lexicography governs. *Id.* The specification may also resolve the meaning of ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); accord *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). “[T]he prosecution

history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations and internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

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.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120.

III. THE PARTIES' STIPULATED TERMS

The parties reached agreement on constructions for certain terms, as stated in their Corrected Joint Claim Construction and Prehearing Statement (Dkt. No. 99 at Ex. A) and their Joint Claim Construction Chart (Dkt. No. 125). The parties' agreements are set forth in Appendix A to the April 2, 2015 Claim Construction Memorandum and Order. Dkt. No. 135.

IV. DISPUTED TERMS IN U.S. PATENT NO. 7,047,561

The '561 Patent, titled "Firewall for Real-Time Internet Applications," issued on May 16, 2006, and bears a filing date of September 28, 2000. The Abstract of the '561 Patent states:

The present invention relates to a firewall for use in association with real-time Internet applications such as Voice over Internet Protocol (VoIP). The firewall applies an application proxy to the signaling and control channels and a packet filter to the bearer channels. One of the features of hybrid firewall is that the application proxy can instruct the packet filter as to which bearer channels to enable and disable for the duration of a real-time Internet application session. The hybrid firewall can also intelligently perform network address translation (NAT) on Internet protocol packets incoming and outgoing to the firewall.

A. "application proxy"

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a hardware and/or software component capable of operating at an upper level of the protocol stack and communicating with external services on behalf of a client"	"a hardware and/or software component that operates at the upper levels of the protocol stack and communicates with external services on behalf of a client"

Dkt. No. 248 at 1. The parties submit that this term appears in Claims 1, 6, 9, 11, 12, 13, 16, 17, 18, and 21 of the '561 Patent. *Id.*

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with the following preliminary construction: "a hardware and/or software component configured to operate at an upper level of the protocol stack and communicate with external services on behalf of a client."

At the July 16, 2015 hearing, the parties rested on their briefing and presented no oral argument as to this disputed term.

(1) The Parties' Positions

Defendants argue that “[o]ne of ordinary skill in art reading the[] definitions in the specification and file history would have immediately understood that the claimed ‘application proxy’ actually ‘operates at the upper levels of the protocol stack and communicates with external services on behalf of a client’ and does not just have the mere capability of doing so.”

Dkt. No. 248 at 2. Defendants urge:

Nowhere in the specification or the file history does the patentee describe the claimed application proxy as merely possessing the “capability” of operating at an upper level of the protocol stack. Rather, *actual operation* at the upper level of the protocol stack is a fundamental characteristic of an application proxy and should be required by the proper construction of this term.

Id. at 3.

Plaintiff replies that “[b]y requiring the actual performance [of] those operations, Metaswitch is improperly trying to transform apparatus claims into methods claims.” Dkt. No. 270 at 1. Further, Plaintiff argues, “[t]o the extent Defendants contend that the claimed application proxy must be capable of operating at two or more levels of the upper levels of the protocol stack, such an interpretation of the claims would be unduly narrow.” *Id.* at 2.

(2) Analysis

Claim 1 of the ‘561 Patent, for example, recites:

1. A firewall for Internet protocol packets carrying data for a real-time Internet application, each of said Internet protocol packets being associated with any one of a signaling channel, a control channel, or a bearer channel of said real-time Internet application, the firewall comprising:
 - an *application proxy* and a packet filter,
 - the firewall applying the Internet protocol packets associated with the signaling channel and the control channel to the *application proxy*, and the

firewall applying the Internet protocol packets associated with the bearer channel to the packet filter.

The specification discloses:

Another classification of firewall is the application proxy or proxy server. An application proxy *operates* at the upper levels of the protocol stack such as the application layer and presentation layer and provides proxy services on external networks for protected internal clients. The role of an application proxy is to communicate with external services on behalf of a client.

* * *

Application proxy 102 is a specialized application program running on hybrid firewall 100. Application proxy 102 takes a user's (such as VoIP phone 112 and PC with VoIP phone client 114) requests for service and forwards them, as appropriate according to the firewall security policy, to an external service (such as VoIP phone 122 and PC with VoIP phone client 124). Application proxy 102 runs transparently between a user and an external service. Instead of a user communicating with an external service directly, a user communicates with application proxy 102 which in turn communicates with an external service. In this way, application proxy 102 will only allow communications which are directly related to the desired service to pass thorough [*sic*, through] hybrid firewall 100. As well, application proxy 102 acts as a sacrificial lamb which will absorb any hacker attacks for a user.

'561 Patent at 1:29-35 & 4:63-5:11 (emphasis added).

During prosecution, the patentee emphasized:

An application proxy, as taught by the present application, "*operates at the upper levels of the protocol stack* such as the application layer and presentation layer and *provides proxy services on external networks for protected internal clients. The role of an application proxy is to communicate with external services on behalf of a client*" (emphasis added) (pgs. 1-2 of the present application). And, in particular, the invention in the present application "relates to a firewall which is optimized for use with real-time Internet applications such as voice, fax, video or multimedia. The firewall includes *an application proxy operating at the application layer (layer 7)* for a portion of the real-time Internet application, and a packet filter operating at the network layer (layer 3) and the transport layer (layer 4) for another portion of the real-time Internet application" (emphasis added) (pg. 3 of the present application).

Dkt. No. 248, Ex. 3, July 2, 2004 Response at 7 (GENBAND00002749).

As to extrinsic evidence, Defendants submit the opinions of their expert that “application proxy” is a well understood term in the art of networking and “is a service that operates at the upper layers of the protocol stack and communicates with external services on behalf of a client.” Dkt. No. 248, Ex. 2, Nov. 11, 2014 Williams Decl. at ¶ 98.

On balance, Defendants have not adequately justified requiring actual operation and communication as opposed to configuration to operate in such a manner. *See Microprocessor Enhancement Corp. v. Texas Instruments, Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) (finding that claim recited a limitation “possessing the recited structure and *capable* of performing the recited functions”) (emphasis added); *see also* ’561 Patent at 8:4–8 (“[a]pplication proxy 102 . . . stored in hard disk 216 and executed on workstation motherboard 202 through the use of processor 204 . . .”) (emphasis added).

Finally, to whatever extent Defendants are arguing that an application proxy must operate at more than one level of a protocol stack, such a limitation would read out disclosed embodiments and is therefore disfavored. *See id.* at 2:21–28 (“The firewall includes an application proxy operating at the application layer (layer 7) . . .”); *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics*, 90 F.3d at 1583) (“[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct’”).

The Court therefore hereby construes “**application proxy**” to mean “**a hardware and/or software component configured to operate at an upper level of the protocol stack and communicate with external services on behalf of a client.**”

B. “packet filter”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“a hardware and/or software component capable of examining packets and, based on pre-defined filtering rules, determining which packets to allow or block”	“a hardware and/or software component that examines all incoming and outgoing data packets and, based on pre-defined filtering rules, determines which packets to allow or block”

Dkt. No. 248 at 3. The parties submit that this term appears in Claims 1, 6, 11, 12, 13, 17, and 18 of the ’561 Patent. *Id.*

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with the following preliminary construction: “a hardware and/or software component configured to examine incoming and/or outgoing packets and, based on pre-defined filtering rules, determine which packets to allow or block.”

At the July 16, 2015 hearing, the parties rested on their briefing and presented no oral argument as to this disputed term.

(1) The Parties’ Positions

Defendants argue that Plaintiff “once again attempts to press its luck at ‘capability’ claiming,” but “[b]ecause the patent applicants clearly defined this term within the specification, this definition should control.” Dkt. No. 248 at 3. Defendants urge:

Nowhere in the specification or the file history does the patentee describe the claimed “packet filter” as merely possessing the *capability* of examining packets and, based on pre-defined filtering rules, determining which packets to allow or block. Rather, the *actual* examination of packets is a fundamental characteristic of this “well-known component” used in firewalls.

Id. at 4.

Plaintiff responds that “[f]or the same reasons discussed above with reference to ‘application proxy,’ there is no justification for requiring actual performance of the described

functionality.” Dkt. No. 270 at 3. Plaintiff also argues that “[f]or the reasons discussed below [as to the term ‘applying . . . to the packet filter’], ‘packet filter’ should not be construed as being required to examine *all* packets.” *Id.* at 4 (emphasis added).

(2) Analysis

Claim 1 of the ‘561 Patent, for example, recites (emphasis added):

1. A firewall for Internet protocol packets carrying data for a real-time Internet application, each of said Internet protocol packets being associated with any one of a signaling channel, a control channel, or a bearer channel of said real-time Internet application, the firewall comprising:
 - an application proxy and a *packet filter*,
 - the firewall applying the Internet protocol packets associated with the signaling channel and the control channel to the application proxy, and the firewall applying the Internet protocol packets associated with the bearer channel to the *packet filter*.

The specification discloses:

Firewalls can generally be classified as falling into one of four categories. The most basic category is the packet filter which works in the lower layers of the network protocol stack such as the transport layer and network layer. A packet filter examines all incoming and outgoing data packets and, based on pre-defined filtering rules, determines which packets will be allowed to pass.

’561 Patent at 1:18–24.

As to extrinsic evidence, Defendants submit a technical dictionary that defines “packet filtering” as “the recognition and selective transmission or blocking of individual packets based on destination addresses or other packet contents. Packet filtering can be an elementary form of firewall in that it can accept or reject packets based on predefined rules. This ability helps to control network traffic.” Dkt. No. 248, Ex. 4, *Newton’s Telecom Dictionary* 510 (17th ed. 2001); *see* Dkt. No. 248, Ex. 2, Nov. 11, 2014 Williams Decl. at ¶ 104 (citing *Newton’s Telecom Dictionary*).

For substantially the same reasons as for the term “application proxy” (addressed above), the Court rejects Defendants’ proposal of requiring actually examining and determining as opposed to configuration to do so. As for Defendants’ proposal that a packet filter must examine *all* packets, such a requirement is not apparent as to the term “packet filter” itself but is addressed below as to the term “applying the Internet protocol packets associated with the bearer channel to [a/the] packet filter.”

The Court therefore hereby construes **“packet filter”** to mean **“a hardware and/or software component configured to examine incoming and/or outgoing packets and, based on pre-defined filtering rules, determine which packets to allow or block.”**

C. “applying the Internet protocol packets associated with the bearer channel to [a/the] packet filter”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.	<p>“applying all the IP packets associated with the bearer channel to the packet filter”</p> <p>Alternatively: “applying, for the setup, duration, and take down of the real-time Internet application, all IP packets associated with the bearer channel to the packet filter”²</p>

Dkt. No. 248 at 4. The parties submit that this term appears in Claims 1, 12, and 17 of the ’561 Patent. *Id.*

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with the following preliminary construction: “applying, for the setup, duration, and take down of the

² “Alternatively,” Defendants submit, “the Court should apply its previous construction for the signaling channel and control channel packets to the bearer channel packets and construe this phrase to mean ‘applying, for the setup, duration, and take down of the real-time Internet application, all IP packets associated with the bearer channel to the packet filter.’” Dkt. No. 248 at 6 n.1.

real-time Internet application, all IP packets associated with the bearer channel to the packet filter.” At the July 16, 2015 hearing, Defendants agreed to the Court’s preliminary construction, but Plaintiff was opposed.

(1) The Parties’ Positions

Defendants submit that the Court has already found a prosecution history disclaimer as to the similar term “applying the Internet protocol packets associated with the signaling channel and control channel to [an/the] application proxy.” Dkt. No. 248 at 4. Defendants urge that “*both* the control and signaling channel packets, as well as the bearer channel packets, are subject to the same limitation: namely, that all the specified type of packets must be applied to the recited firewall component (either the application proxy or the packet filter).” *Id.* at 5–6.

Plaintiff responds that Defendants rely upon prosecution history relating to the term “applying . . . to the application proxy,” but “[s]tatements made with respect to one limitation (‘applying . . . to the application proxy’) do not constitute a clear and unmistakable disclaimer with respect to an entirely separate limitation (‘applying . . . to the packet filter’).” Dkt. No. 270 at 4–5.

(2) Analysis

Claim 1 of the ‘561 Patent, for example, recites:

1. A firewall for Internet protocol packets carrying data for a real-time Internet application, each of said Internet protocol packets being associated with any one of a signaling channel, a control channel, or a bearer channel of said real-time Internet application, the firewall comprising:
 - an application proxy and a packet filter,
 - the firewall applying the Internet protocol packets associated with the signaling channel and the control channel to the application proxy, and the firewall *applying the Internet protocol packets associated with the bearer channel to the packet filter.*

During prosecution, the patentee stated as follows regarding the application proxy:

Claim 1 recites “applying the Internet protocol packets associated with the signaling channel and control channel to the application proxy” Implicit in this claim language is that *all* the packets associated with the signaling channel and the control channel are applied to the application proxy.

Dkt. No. 248, Ex. 3, Mar. 24, 2005 Response at 3 (GENBAND2786). Later during prosecution, in an Appeal Brief, the patentee further stated:

[I]t appears that the Patent Office is interpreting the control processor 344 of Baum [(United States Patent No. 6,400,707)] as equivalent to Appellant’s application proxy. However, this interpretation does not establish anticipation because the control processor 344 of Baum does not have the claimed functionality. Specifically, claim 1 recites “applying the Internet protocol packets associated with the signaling channel and the control channel to the application proxy. . . .” Important to note in this language is that the language does not say “applying some of the packets to the application proxy”, rather the language clearly indicates that the Internet protocol packets associated with the signaling channel and the control channel are applied to the application proxy. Not some, but *all*. In contrast, Baum’s control processor 344 drops out of the call and does not process the call take down or other signaling channel or control channel packets, as recited in the claim. To this extent, Baum’s control processor 344 is not an application proxy, nor does Baum’s control processor 344 perform the recited function of the application proxy.

Id., July 27, 2005 Appeal Brief at 6 (GENBAND2813) (emphasis added).

Based in part on this prosecution history, the Court found that “the claim language, the specification, and the prosecution history all support . . . that for the setup, duration, and take down of a real-time Internet application, *all* IP packets associated with the signaling channel and control channel are applied to the application proxy.” Dkt. No. 135 at 19.

Likewise, the patentee also stated as follows, in the same Appeal Brief quoted above, regarding the packet filter:

The present invention is a firewall (100) that helps a first network (110) interoperate with a second network (120). . . . The firewall 100 receives a stream of packets and filters them according to the present invention. The firewall (100) of the present invention is actually two firewalls in one. The first firewall is a packet filter (106) that operates on the bearer channel of a communication system. The bearer channel usually handles the voice part of a Voice over IP (VoIP)

phone call, and thus *all* the packets associated with the bearer channel are filtered by the packet filter (106) in the first firewall.

Dkt. No. 248, Ex. 3, July 27, 2005 Appeal Brief at 2 (GENBAND2809) (emphasis added). Plaintiff urges that no disclaimer is warranted because “that statement does not discuss any particular claim limitation, and the patentee did not rely on that statement to distinguish any prior art reference.” Dkt. No. 270 at 5.

At the July 16, 2015 hearing, Plaintiff reiterated that this above-quoted discussion of the bearer channel did not address any particular claim or term and was not relied upon to distinguish prior art. Plaintiff also emphasized that in the above-quoted Appeal Brief the patentee distinguished prior art based on the first “applying . . . ” limitation, not the second “applying . . . ” limitation that is now in dispute here. In support, Plaintiff cited *North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1346 (Fed. Cir. 2005).

The patentee’s statements, however, should be given effect in the Court’s construction even though the patentee may have presented other arguments as well. *See Omega Eng’g v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.”); *see also Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381 (Fed. Cir. 2011) (“The patentee is bound by representations made and actions that were taken in order to obtain the patent.”); *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995) (“Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.”) This finding is also consistent with the specification. *See* ’561 Patent at 1:18-24 (“A packet filter examines all incoming and outgoing data packets and, based on pre-defined filtering rules, determines which packets will be allowed to pass.”).

Alternatively and in addition, even if the Court were to find no prosecution disclaimer, the above-quoted passages from the prosecution history confirm that the recitals of “applying [packets] to [a filter or proxy]” mean that all such packets are applied to that filter or proxy. *See* Dkt. No. 248, Ex. 3, Mar. 24, 2005 Response at 3 (GENBAND2786); *see also id.*, July 27, 2005 Appeal Brief at 2 & 6 (GENBAND2809 & GENBAND2813).

Nonetheless, for substantially the same reasons set forth previously as to the term “applying the Internet protocol packets associated with the signaling channel and control channel to [an/the] application proxy” (*see* Dkt. No. 135 at 16-20), the “all packets” limitation is required only for the setup, duration, and take down of the real-time Internet application. Indeed, as noted above, Defendants have submitted this as an alternative proposed construction. *See* Dkt. No. 248 at 6 n.1.

The Court therefore hereby construes **“applying the Internet protocol packets associated with the bearer channel to [a/the] packet filter”** to mean **“applying, for the setup, duration, and take down of the real-time Internet application, all IP packets associated with the bearer channel to the packet filter.”**

V. DISPUTED TERMS IN U.S. PATENTS NO. 7,184,427 AND 7,990,984

The '427 Patent, titled “System and Method for Communicating Telecommunication Information from a Broadband Network to a Telecommunication Network,” issued on February 27, 2007, and bears a filing date of November 28, 2000. The Abstract of the '427 Patent states:

A system for communicating telecommunication information includes a memory, packetization modules, and a telecommunication interface module. The memory stores subscriber profiles associating each of several subscribers with a telecommunication interface. The packetization modules receive data packets from a broadband network and extract telecommunication information associated with a subscriber from the data packets. The telecommunication interface module

communicates the telecommunication information to a telecommunication network using a telecommunication interface associated with the subscriber.

The '984 Patent is a continuation of the '427 Patent and bears the same title. The '984 Patent issued on August 2, 2001.

A. “telecommunications interface module[s] operable to . . .,” “packetization module[s] operable to . . .,” and “echo cancellation module[s] operable to . . .”

“telecommunications interface module[s] operable to . . .” ('427 Patent, Claims 1, 12 & 28; '984 Patent, Claim 7)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.</p>	<p>This is a means-plus-function term governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “communicating first/second telecommunication information to a telecommunication network using a first/second telecommunication interface/interface format associated with the first/second subscriber”</p> <p>Structure: “no sufficient structure disclosed; indefinite”</p>

**“packetization module[s] operable to . . .”
(’427 Patent, Claims 1, 12 & 28; ’984 Patent, Claims 1 & 7)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.</p>	<p>This is a means-plus-function term governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “receiving first/second data packets from a first/second broadband network using a first/second data communications protocol and extracting first/second telecommunication information associated with a first/second subscriber from the first/second data packets”</p> <p>Structure: “no sufficient structure disclosed; indefinite”</p>

**“echo cancellation module[s] operable to . . .”
(’427 Patent, Claims 11 & 37; ’984 Patent, Claim 6)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.</p>	<p>This is a means-plus-function term governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “performing echo cancellation on the first telecommunication information but not the second telecommunication information” (’427 Patent, Claim 11; ’984 Patent, Claim 6) “performing echo cancellation on the telecommunication information according to whether the subscriber’s profile indicates that the echo cancellation module should perform echo cancellation on the subscriber’s telecommunication information (’427 Patent, Claim 37)</p> <p>Structure: “no sufficient structure disclosed; indefinite”</p>

Dkt. No. 248 at 6–7.

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with the following preliminary constructions:

<u>Term</u>	<u>Preliminary Construction</u>
“telecommunications interface module[s] operable to . . . ” (’427 Patent, Claims 1, 12 & 28;)’984 Patent, Claim 7)	Plain and ordinary meaning (§ 112, ¶ 6 does NOT apply)
“packetization module[s] operable to . . . ” (’427 Patent, Claims 1, 12 & 28;)’984 Patent, Claims 1 & 7)	§ 112, ¶ 6 applies Function: (undisputed) Corresponding Structure: “packetization modules 110 implemented on a separate printed circuit board; and equivalents thereof”
“echo cancellation module[s] operable to . . . ” (’427 Patent, Claims 11 & 37;)’984 Patent, Claim 6)	§ 112, ¶ 6 applies Function: (undisputed) Corresponding Structure: “echo cancellation modules 106 implemented on a separate printed circuit board; and equivalents thereof”

(1) The Parties’ Positions

Defendants argue that “[t]he claim language, itself, is directed to the functional capabilities of the modules (e.g., communicating, receiving, extracting, selectively performing echo cancellation), not of any particular structure that implements those functions.” Dkt. No. 248 at 7. Defendants emphasize that in *Williamson v. Citrix Online LLC*, the Court of Appeals for the Federal Circuit found that the term “distributed learning control module” was a means-plus-

function term, and the court stated that “[m]odule’ is a well-known nonce word that can operate as a substitute for ‘means’ in the context of § 112, para. 6.” *Id.* (quoting --- F.3d ----, 2015 WL 3687459, at *8 (Fed. Cir. June 16, 2015).)

Plaintiff responds that “[p]roducts from Cisco, Nortel, and Tellabs available at the time of the filing of the patents confirm that the language used in these claim terms have a sufficiently definite meaning that connote structure to one of ordinary skill in the art.” Dkt. No. 270 at 6. Plaintiff also submits that “[t]his Court’s previous identification of ‘telecommunication interface module’ and ‘network interface module’ as sufficient structure further supports [Plaintiff’s] contention that ‘telecommunication interface modules,’ ‘packetization modules,’ and ‘echo cancellation modules’ are not means-plus-function terms.” *Id.* (citing Dkt. No. 135 at 28).

At the July 16, 2015 hearing, Plaintiff reiterated that the specification demonstrates that these modules have structure.

(2) Analysis

Title 35 U.S.C. § 112, ¶ 6³ provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”

It is well settled that [a] claim limitation that actually uses the word “means” invokes a rebuttable presumption that [35 U.S.C.] § 112, ¶ 6 applies. By contrast, a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. The term “means” is central to the analysis.

Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1371–72 (Fed. Cir. 2003) (citations and internal quotation marks omitted); *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d

³ The Leahy-Smith America Invents Act (“AIA”) modified former 35 U.S.C. § 112, ¶ 6 such that the statute can now be found at 35 U.S.C. § 112(f). It appears that the pre-AIA version applies to the patents-in-suit, but regardless the amendment has no effect on the analysis.

1354, 1358 (Fed. Cir. 2004) (“[A] claim term that does not use ‘means’ will trigger [a] rebuttable presumption that [35 U.S.C.] § 112 ¶ 6 does not apply.”).

Although *Lighting World* characterized this presumption against means-plus-function treatment as “a strong one,” the Court of Appeals for the Federal Circuit recently abrogated *Lighting World* in this regard. See *Williamson v. Citrix Online, LLC*, --- F.3d ----, 2015 WL 3687459, at *7 (Fed. Cir. June 16, 2015).

Instead, “[t]he standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (citations and internal quotation marks omitted).

Claims 1 and 11, for example, recite (emphasis added):

1. A gateway for communicating telecommunication information, comprising:
 - one or more *packetization modules* operable to receive first data packets from a first broadband network using a first data communications protocol and to extract first telecommunication information associated with a first subscriber from the first data packets, the *packetization modules* further operable to receive second data packets from a second broadband network using a second data communication protocol and to extract second telecommunication information associated with a second subscriber from the second data packets, wherein the first and second broadband networks include any of digital subscriber line, cable, and wireless platforms, wherein the first and second data communication protocols includes any of Internet Protocol, Asynchronous Transfer Mode, and Frame Relay protocols; and
 - one or more *telecommunication interface modules* operable to communicate the first telecommunication information to a telecommunication network using a first telecommunication interface format associated with the first subscriber and to communicate the second telecommunication information to the telecommunication network using a second telecommunication interface format associated with the second subscriber, the first and second telecommunication interface formats including any of GR-303, TR-8, SS7, V5, ISDN, and unbundled analog lines.

* * *

11. The gateway of claim 1, further comprising one or more *echo cancellation modules* operable to perform echo cancellation on the first telecommunication information but not the second telecommunication information.

Defendants urge that “even the figures illustrate the modules as nothing more than structurally nondescript black boxes.” Dkt. No. 248 at 8; *see* ’427 Patent at Figs. 5–6. Defendants also submit that the specification discloses functionality without disclosing structure. *See* ’427 Patent at 1:50–61 (“packetization modules” receiving data packets and extracting telecommunication information) & 16:2–20 (similar); *see also id.* at 14:54–15:4 (telecommunication interface modules communicate with switch 16 using several possible interfaces) & 22:7–28 (telecommunication interface modules process information for communication); *id.* at 15:21–36 (disclosing configuration for echo cancellation modules to perform echo cancellation) & 19:46–54 (performing echo cancellation function).

Plaintiff counters by submitting extrinsic evidence of telecommunications products having “modules” that provide functionality associated with the disputed terms. Dkt. No. 270, Ex. 4, “Cisco One and Two Port T1/E1 Multiflex Voice/WAN Interface Cards Data Sheet” at 2–3; *id.*, Ex. 5, “Nortel Networks AccessNode Express” at 1–2; *id.*, Ex. 6, “Tellabs Technical Manual - 2571 and 2572 T1 Echo Canceller Modules” at 2. This evidence demonstrates that in some contexts the term “module” can refer to a physical unit, for example a physical unit that is interchangeable with other similar units. *See id.*, Ex. 5 at 1 (“The AccessNode Express is equipped with a shell shelf that houses any two of the modules associated with the AccessNode Express. These flexible modules can be mixed and matched in any combination based on the

services you or your customers need.”). Plaintiff has also emphasized that the threshold analysis of whether a term is a means-plus-function term can be informed by the specification.⁴

As to the “packetization module . . .” and “echo cancellation module . . .” terms at issue here, however, these terms as used in the claims could refer to any structure that performs the claimed function. *See Williamson*, 2015 WL 3687459, at *8. On balance, Defendants have overcome the presumption that, despite the absence of the word “means,” “packetization module . . .” and “echo cancellation module . . .” are means-plus-function terms.

As to the claimed functions, Plaintiff has expressed no opposition to the functions set forth by Defendants. *See* Dkt. No. 270 at 5–8 & n.4.

As for corresponding structure, the specification discloses “packetization modules 110” and “echo cancellation modules 106”:

FIG. 5 illustrates a gateway 18 that uses several, alternative telecommunication interfaces 26, data compression algorithms, data communication protocols, and data links 28 to communicate telecommunication information. Gateway 18 includes management module 100, memory 102, telecommunication interface modules (TIMs) 104, *echo cancellation modules 106*, compression modules 108, *packetization modules 110*, and network interface modules 112. Management module 100, TIMs 104, *echo cancellation modules 106*, compression modules 108, *packetization modules 110*, and network interface modules 112 represent *functional elements that are reasonably self-contained* so that each can be designed, constructed, and updated substantially independent of the others. In a

⁴ *See Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1296–97 (Fed. Cir. 2014), *abrogated on other grounds by Williamson*, 2015 WL 3687459 (citations omitted):

[T]he first step in the means-plus-function analysis requires us to determine whether the entire claim limitation at issue connotes “sufficiently definite structure” to a person of ordinary skill in the art. In so doing, we naturally look to the specification, prosecution history, and relevant external evidence to construe the limitation. While this inquiry may be similar to looking for corresponding structure in the specification, our precedent requires it when deciding whether a claim limitation lacking means connotes sufficiently definite structure to a person of ordinary skill in the art. Because these inquiries are distinct, it is possible to find that a claim limitation does not connote sufficiently definite structure despite the presence of some corresponding structure in the specification.

particular embodiment, management module 100, TIMs 104, *echo cancellation modules 106*, compression modules 108, *packetization modules 110*, and network interface modules 112 *are implemented on separate printed circuit boards that may be coupled to a backplane in gateway 18.*

'427 Patent at 13:37–55 (emphasis added); *see id.* at 15:21-36 & 16:3-33. These structures are “clearly linked or associated” with the claimed functions identified by Defendants (and as to those functions Plaintiff has expressed no opposition, as noted above).⁵ *See Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1219 (Fed. Cir. 2003) (“The scope of a claim under [35 U.S.C.] section 112, paragraph 6 . . . must be limited to structures *clearly linked or associated* with the claimed function in the specification or prosecution history and equivalents of those structures”) (emphasis added).

To whatever extent Defendants are arguing that these disputed terms are nonetheless indefinite based on failure of the specification to disclose algorithms for performing the claimed functions, the Court rejects such arguments because the algorithm requirement arises only when the corresponding structure is a general-purpose computer. *See Net MoneyIN Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008) (“[A] means-plus-function claim element for which the only disclosed structure is a general purpose computer is invalid if the specification fails to disclose an algorithm for performing the claimed function.”); *see also WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (“In a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose

⁵ Plaintiff proposes that “gateway 18” is an alternative corresponding structure for performing echo cancellation (Dkt. No. 270 at 8 n.4; *see* '427 Patent at 4:2–4, 6:40–42, 8:65–67, 12:27–31, 12:37–40 & 13:15–21), but the specification discloses that the gateway 18 includes echo cancellation modules 106 for performing echo cancellation. *See* '427 Patent at 13:37–55; *see, e.g., id.* at 17:39–43 (“[I]f a subscriber profile indicates that gateway 18 should perform echo cancellation on a subscriber’s telecommunication information, management module 100 selects one of echo cancellation modules 106 to service the subscriber.”).

computer programmed to perform the disclosed algorithm.”). Here, as set forth above, the “packetization modules 110” and the “echo cancellation modules 106” “implemented on separate printed circuit boards” are special-purpose hardware, not general-purpose processors. *See* ’427 Patent at 13:37–55; *see also id.* at 15:21–36 & 16:3–33.

At the July 16, 2015 hearing, Plaintiff argued that there can be modules that are “reasonably self-contained” but that are not on “separate printed circuit boards.” ’427 Patent at 13:37–55. Although the phrase “reasonably self-contained” perhaps describes a property of a structure, “reasonably self-contained” is not itself a particular structure or class of structure. The Court therefore rejects Plaintiff’s apparent argument that implementing modules on separate printed circuit boards is a non-limiting exemplary sub-embodiment. *See* ’427 Patent at 13:37–55.

As to the “telecommunications interface module . . .” term, by contrast, the “prefix” that appears before a purported nonce word may impart structural meaning. *See Williamson*, 2015 WL 3687459, at *8 (“the presence of modifiers can change the meaning of ‘module’”). Further, “the essential inquiry is not merely the presence or absence of the word ‘means’ but whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.*, at *6 (citing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)); *see Greenberg*, 91 F.3d at 1583 (because “detent mechanism” refers to a type of device with an understood meaning in the mechanical arts, term was not a means-plus-function term); *see also id.* (“[T]he fact that a particular mechanism—here ‘detent mechanism’—is defined in functional terms is not sufficient to convert a claim element containing that term into a ‘means for performing a specified function’ within the meaning of section 112(6). Many devices take their names from the functions they perform. The examples are innumerable, such as ‘filter,’ ‘brake,’ ‘clamp,’ ‘screwdriver,’ or ‘lock.’”).

Here, the word “interface” connotes structure such that the “telecommunications interface module . . .” term is not a means-plus-function term. Defendants have not argued for any construction apart from their means-plus-function arguments as to this term, so no further construction is necessary.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
<p>“telecommunications interface module[s] operable to . . .”</p> <p>(’427 Patent, Claims 1, 12 & 28; ’984 Patent, Claim 7)</p>	<p>35 U.S.C. § 112, ¶ 6 does not apply</p> <p>Plain and ordinary meaning</p>
<p>“packetization module[s] operable to . . .”</p> <p>(’427 Patent, Claims 1, 12 & 28; ’984 Patent, Claims 1 & 7)</p>	<p>This is a means-plus-function term governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “receiving first/second data packets from a first/second broadband network using a first/second data communications protocol and extracting first/second telecommunication information associated with a first/second subscriber from the first/second data packets”</p> <p>Corresponding Structure: “packetization modules 110 implemented on a separate printed circuit board; and equivalents thereof”</p>

<p>“echo cancellation module[s] operable to . . .”</p> <p>(’427 Patent, Claims 11 & 37; ’984 Patent, Claim 6)</p>	<p>This is a means-plus-function term governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “performing echo cancellation on the first telecommunication information but not the second telecommunication information (’427 Patent, Claim 11; ’984 Patent, Claim 6) “performing echo cancellation on the telecommunication information according to whether the subscriber’s profile indicates that the echo cancellation module should perform echo cancellation on the subscriber’s telecommunication information” (’427 Patent, Claim 37)</p> <p>Corresponding Structure: “echo cancellation modules 106 implemented on a separate printed circuit board; and equivalents thereof”</p>
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B. “the [first / second] telecommunication interface”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>“No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.”</p>	<p>Indefinite for lack of antecedent basis</p>

Dkt. No. 248 at 10. The parties submit that these terms appear in Claim 6 of the ’427 Patent.

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with the following preliminary constructions: “The antecedent basis for ‘the first telecommunication interface’ in Claim 6 is ‘a first telecommunication interface format’ in Claim 1, and the antecedent basis for ‘the second telecommunication interface’ in Claim 6 is ‘a second telecommunication interface format’ in Claim 1.”

At the July 16, 2015 hearing, the parties rested on their briefing and presented no oral argument as to this disputed term.

(1) The Parties' Positions

Defendants argue that “since claim 1 recites telecommunication interface *modules* and *formats*, but not telecommunication *interfaces* alone, there is no explicit antecedent basis for ‘the [first / second] telecommunication *interface*’ in claim 6.” Dkt. No. 248 at 10–11 (square brackets Defendants’). For example, Defendants urge that “[i]t is not clear whether ‘the first telecommunication interface’ in claim 6 refers to ‘a first telecommunication interface format’ or a first one of the ‘one or more telecommunication interface modules’ in claim 1.” *Id.*

Plaintiff responds: “The antecedent basis of the ‘[first / second] telecommunication interface’ of Claim 6 is the ‘[first / second] telecommunication interface format’ of Claim 1.” Dkt. No. 270 at 8 (square brackets Plaintiff’s). Plaintiff also argues that this antecedent basis is clear from the prosecution history. *Id.* at 9–10.

(2) Analysis

The disputed terms appear in Claim 6 of the ’427 Patent, which depends from Claim 5, which in turn depends from Claim 1. Claims 1, 5, and 6 of the ’427 Patent recite (emphasis added):

1. A gateway for communicating telecommunication information, comprising:
 - one or more packetization modules operable to receive first data packets from a first broadband network using a first data communications protocol and to extract first telecommunication information associated with a first subscriber from the first data packets, the packetization modules further operable to receive second data packets from a second broadband network using a second data communication protocol and to extract second telecommunication information associated with a second subscriber from the second data packets, wherein the first and second broadband networks include any of digital subscriber line, cable, and wireless platforms, wherein the first and second data communication protocols includes any of Internet Protocol, Asynchronous Transfer Mode, and Frame Relay protocols; and

one or more telecommunication interface modules operable to communicate the first telecommunication information to a telecommunication network using *a first telecommunication interface format* associated with the first subscriber and to communicate the second telecommunication information to the telecommunication network using *a second telecommunication interface format* associated with the second subscriber, the first and second telecommunication interface formats including any of GR-303, TR-8, SS7, V5, ISDN, and unbundled analog lines.

* * *

5. The gateway of claim 1, further comprising one or more compression modules operable to de-compress the first telecommunication information using a first compression algorithm associated with the first subscriber and to de-compress the second telecommunication information using a second compression algorithm associated with the second subscriber.

6. The gateway of claim 5, further comprising a memory operable to store a first subscriber profile associating the first subscriber with *the first telecommunication interface* and the first compression algorithm and a second subscriber profile associating the second subscriber with *the second telecommunication interface* and the second compression algorithm.

On balance, the claim language is sufficiently clear that the antecedent basis for “the first telecommunication interface” in Claim 6 is “a first telecommunication interface format” in Claim 1, and likewise the antecedent basis for “the second telecommunication interface” in Claim 6 is “a second telecommunication interface format” in Claim 1. *See Energizer Holdings Inc. v. Int’l Trade Comm’n*, 435 F.3d 1366, 1371 (Fed. Cir. 2006) (holding that “an anode gel comprised of zinc as the active anode component” provided implicit antecedent basis for “said zinc anode”); *see also Ex Parte Porter*, 25 U.S.P.Q. 2d (BNA) 1144, 1145 (B.P.A.I. 1992) (“The term ‘the controlled fluid’ . . . finds reasonable antecedent basis in the previously recited ‘controlled stream of fluid’”); *Manual for Patent Examining Procedure* § 2173.05(e) (9th ed., Mar. 2014) (noting that “the failure to provide explicit antecedent basis for terms does not always render a claim indefinite”).

This conclusion is reinforced by the prosecution history, which reveals that whereas originally the antecedent basis for the disputed terms in Claim 6 was explicit, the patentee added the word “format” to Claim 1 but did add that word to Claim 6. *See* Dkt. No. 270, Ex. 9, May 19, 2005 Response to Examiner’s Action at 2–3. Further, above-quoted Claim 1 recites “GR-303, TR-8, SS7, V5, ISDN, and unbundled analog lines,” which are referred to in the specification as “telecommunication interface[s]” without the word “format.” ’427 Patent at 6:27-30. Finally, surrounding claim language provides probative context, in particular the recitals of “associated with the [first / second] subscriber” in Claim 1 and “associating with the [first / second] subscriber” in Claim 6. *See Phillips*, 415 F.3d at 1314 (“the context in which a term is used in the asserted claim can be highly instructive”).

The Court accordingly hereby finds that the antecedent basis for **“the first telecommunication interface”** in Claim 6 is **“a first telecommunication interface format”** in Claim 1, and the antecedent basis for **“the second telecommunication interface”** in Claim 6 is **“a second telecommunication interface format”** in Claim 1.

VI. DISPUTED TERMS IN U.S. PATENT NO. 6,885,658

The ’658 Patent, titled “Method and Apparatus for Interworking Between Internet Protocol (IP) Telephony Protocols,” issued on April 26, 2005, and bears a priority date of June 7, 1999. The Abstract of the ’658 Patent states:

A method and an apparatus for interworking between internet protocol (IP) telephony protocols includes a call server. The call server includes a first protocol agent for communicating with a first protocol device according to a first protocol. A second protocol agent communicates with a second protocol device according to a second protocol. An interworking agent provides functions usable by the first and second protocol agents to communicate with each other according to a third protocol. The third protocol is a superset of functions provided by the first and second protocols.

A. “an interworking agent for providing functions usable by the first and second protocol agents to communicate with each other according to a third protocol, the functions provided by the third protocol being a superset of functions provided by the first and second IP telephony protocols, said interworking agent further adapted to determine that a first parameter associated with the first IP telephony protocol does not map to the second IP telephony protocol and communicating first parameter to the second protocol” and “a [first / second] protocol agent for communicating with a [first / second] internet protocol (IP) telephony device according to a [first / second] IP telephony protocol”

<p>“an interworking agent for providing functions usable by the first and second protocol agents to communicate with each other according to a third protocol, the functions provided by the third protocol being a superset of functions provided by the first and second IP telephony protocols, said interworking agent further adapted to determine that a first parameter associated with the first IP telephony protocol does not map to the second IP telephony protocol and communicating first parameter to the second protocol”</p>	
<p>Plaintiff’s Proposed Construction</p>	<p>Defendants’ Proposed Construction</p>
<p>No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.</p>	<p>This is a means-plus-function term governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “(1) providing functions usable by the first and second protocol agents to communicate with each other according to a third protocol, the functions provided by the third protocol being a superset of functions provided by the first and second IP telephony protocols, and (2) determining that a first parameter associated with the first IP telephony protocol does not map to the second IP telephony protocol and communicating first parameter to the second protocol agent without alteration”</p> <p>Structure: “no sufficient structure disclosed; indefinite”</p>

“a [first / second] protocol agent for communicating with a [first / second] internet protocol (IP) telephony device according to a [first / second] IP telephony protocol”	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; this claim language does not require construction and should be accorded its plain and ordinary meaning.	<p>These are means-plus-function terms governed under 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “communicating with a [first / second] internet protocol (IP) telephony device according to a [first / second] IP telephony protocol”</p> <p>Structure: “no sufficient structure disclosed; indefinite”</p>

Dkt. No. 248 at 12-13.⁶ The parties submit that these terms appear in Claim 1 of the ’658 Patent.

Shortly before the start of the July 16, 2015 hearing, the Court provided the parties with the following preliminary construction for these disputed terms: “Plain and ordinary meaning.”

(1) The Parties’ Positions

Defendants argue that these are means-plus-function terms, despite the absence of the word “means,” because “they ‘recite[] function without reciting sufficient structure for performing that function.’” Dkt. No. 248 at 13 (quoting *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1353 (Fed. Cir. 2006); citing *Robert Bosch, LLC v. Snap-On, Inc.*, 769 F.3d 1094, 1097 (Fed. Cir. 2014); citing *Williamson*, 2015 WL 3687459). In particular, Defendants argue that “‘agent’ is nonce word that does not connote any particular structure and is, rather, defined by the function it is to perform.” Dkt. No. 248 at 14. “[N]othing in claim 1 recites any

⁶ Plaintiff agrees that, if the Court finds that these are means-plus-function terms, then the claimed functions are as Defendants have set forth. *Compare* Dkt. No. 248 at 12–13 *with* Dkt. No. 270 at 15 n.7.

structure for performing the claimed functions,” Defendants argue, “nor is ‘agent’ a recognized structural element in the telecommunications field.” *Id.* Defendants conclude that the specification fails to disclose any corresponding structure, such as algorithms by which the claimed functions could be carried out by a general-purpose computer, and so the disputed “agent” terms are indefinite. *See id.* at 16–17.

Plaintiff responds that the presumption against means-plus-function treatment is not overcome because “[t]he term ‘agent’ connotes structure and is not a so-called ‘nonce’ word.” Dkt. No. 270 at 12. Plaintiff submits, for example, that “[o]ne way in which the specification shows that the interworking agent is a structural element is by explaining that the interworking agent interacts and communicates with other components of the call server.” *Id.* at 12–13. Plaintiff likewise submits that “[o]ne way in which the specification shows that the protocol agents are structural elements is by explaining that the protocol agents are distinct components of the call server that communicate with other call server components and each other.” *Id.* at 13. Plaintiff thus urges that *Williamson* is distinguishable because there the claims and the written description did not “describe how the [term] interacts with other components . . . in a way that might inform the structural character of the limitation-in-question or otherwise impart structure.” *Id.* at 14 (quoting 2015 WL 3687459, at *8). Alternatively, Plaintiff argues that even if these are found to be means-plus-function terms, the specification sets forth sufficient corresponding structure. Dkt. No. 270 at 15–17.

At the July 16, 2015 hearing, Defendants argued that “agent” refers to software for performing a specified function, and Defendants urged that software is not structural (at least for purposes of 35 U.S.C. § 112, ¶ 6) unless coupled with special-purpose hardware. Plaintiff

responded that software can be structure, and Plaintiff reiterated that the term “agent” refers to a class of software structures known to a person of ordinary skill in the art.

(2) Analysis

Claim 1 of the ‘658 Patent recites:

1. A call server comprising:

(a) a fi[r]st protocol agent for communicating with a first internet protocol (IP) telephony device according to a first IP telephony protocol;

(b) a second protocol agent for communicating with a second IP telephony device according to a second IP telephony protocol; and

(c) an interworking agent for providing functions usable by the first and second protocol agents to communicate with each other according to a third protocol, the functions provided by the third protocol being a superset of functions provided by the first and second IP telephony protocols, said interworking agent further adapted to determine that a first parameter associated with the first IP telephony protocol does not map to the second IP telephony protocol and communicating first parameter to the second protocol agent without alteration.

The disputed claim language itself supports Plaintiff’s position that a person of ordinary skill in the art would understand “agent” as a particular software structure, and the claim and the specification provide context as to the “inputs and outputs” and how the agents “interact[] with other components . . . in a way that . . . inform[s] the structural character of the limitation-in-question or otherwise impart[s] structure.” *Williamson*, 2015 WL 3687459, at *8. Although Defendants urge that “agents” are disclosed in the specification only in terms of function (*see, e.g.,* ‘658 Patent at 3:9–20, 4:66–5:61 & 9:58–10:3), the specification implies that “agents” are a recognized software structure. *See id.* at 5:39–40 (“In a preferred embodiment of the invention, the interworking agent is divided into separate software components”); *see also id.* at 5:45–61 (“By allowing the protocol agents to reside on separate machines, the interworking agents according to embodiments of the present invention allow efficient division of call processing functions.”); *id.* at 4:46–47 & 4:66–5:1 (“[t]he call server is a software entity . . . in which the

call processing functions . . . are separated into call agents”); *id.* at 6:22–25 (“[I]nterworking agents according to embodiments of the present invention communicate with each other.”); *id.* at 12:3–23 & 19:18–43 (similar).

Also of note, Plaintiff has cited a decision in which the Court of Appeals for the Federal Circuit construed an “agent” term without any apparent argument or suggestion that the term was a means-plus-function term. *See In re Thrift*, 298 F.3d 1357, 1364 (Fed. Cir. 2002) (construing “speech user agent”). Although Defendants responded at the July 16, 2015 hearing that the term at issue in *In re Thrift* did not involve an agent for performing a specified function, *In re Thrift* nonetheless provides additional confirmation that the term “agent” connotes structure to a person of ordinary skill in the art.

Defendants further submit that “[t]he patent figures similarly show the interworking and protocol agents as nothing more than generic, unadorned black boxes with no structural detail.” Dkt. No. 248 at 14–15. This argument is primarily applicable to the issue of whether the specification discloses sufficient corresponding structure, and that issue arises only if a term is found to be a means-plus-function term. *See, e.g., Apple*, 757 F.3d at 1296–97 (noting that these inquiries are “distinct”). This is also true as to Defendants’ argument that the specification discloses no algorithms for implementing the agents. Instead, evaluation of whether a term connotes structure can take into consideration all relevant evidence, including extrinsic evidence. *See id.* at 1298 (“The correct inquiry, when ‘means’ is absent from a limitation, is whether the limitation, read in light of the remaining claim language, specification, prosecution history, and relevant extrinsic evidence, has sufficiently definite structure to a person of ordinary skill in the art.”).

As to extrinsic evidence, Plaintiff has submitted technical dictionary definitions, a brochure, and a book as additional evidence that “agent” has structural meaning. *See* Dkt. No. 270, Ex. 12, *Dictionary of Computer Science Engineering & Technology* 12 (2001) (defining “agent” as: “(1) a computational entity that acts on behalf of other entities in an autonomous fashion. (2) in the client-server model, the part of the system that performs information preparation and exchange on behalf of a client or server.”); *see also id.*, Ex. 13, *Microsoft Computer Dictionary* 18–19 (4th ed. 1999) (defining “agent” as: “1. A program that performs a background task for a user and reports to the user when the task is done or some expected event has taken place. . . . 3. In client/server applications, a process that mediates between the client and the server.”).⁷

Also, Plaintiff’s expert opines in summary:

[O]ne of ordinary skill in the art would understand that the ’658 Patent uses the term “interworking agent” to refer to a structural component. This is because interworking agents are components that are connected to other components of a call server (such as other protocol agents), they can be accessed by other components such that those components can execute on separate machines, and they can communicate with each other. Thus, one of ordinary skill in the art would understand that “interworking agent” is a term that refers to sufficiently definite structure in the ’658 Patent such that it is not a means-plus-function term.

Dkt. No. 270, Ex. 3, Nov. 25, 2014 Lipoff Rebuttal Decl. at ¶ 408; *see id.* at ¶ 402 (similar as to “protocol agent”).

Thus, in light of the above-discussed intrinsic and extrinsic evidence, Defendants have failed to overcome the presumption that the disputed terms are not means-plus-function terms.

See Williamson, 2015 WL 3687459, at *6. Unlike the “packetization module . . .” and “echo

⁷ *See also id.*, Ex. 14 at 2 & 6; *id.*, Ex. 15 at 7 & 26. At the July 16, 2015 hearing, Defendants argued that the brochure and the book should not be considered because both are dated in 2013, long after the relevant dates of the ’658 Patent. *See id.* at Exs. 14 & 15. Because this brochure and this book have not significantly affected the Court’s analysis, the Court need not resolve their relevance.

cancellation module . . .” terms addressed above, which could refer to any structure that performs the claimed function, the “agent” terms refer to particular classes of software structures that Plaintiff has demonstrated are recognized in the art, as set forth above. Even assuming for the sake of argument that the “agent” classes of structures are known purely in terms of function, as Defendants urge, structure can be defined in terms of function. *See Greenberg*, 91 F.3d at 1583 (“[T]he fact that a particular mechanism—here ‘detent mechanism’—is defined in functional terms is not sufficient to convert a claim element containing that term into a ‘means for performing a specified function’ within the meaning of section 112(6). Many devices take their names from the functions they perform. The examples are innumerable, such as ‘filter,’ ‘brake,’ ‘clamp,’ ‘screwdriver,’ or ‘lock.’”). Further, Defendants have not identified any authority that supports their above-noted argument at the July 16, 2015 hearing that software limitations are necessarily subject to 35 U.S.C. § 112, ¶ 6 unless coupled with special-purpose hardware.

The Court therefore hereby expressly rejects Defendants’ proposals that the disputed terms are means-plus-function terms. No further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”).

The Court accordingly hereby construes “**an interworking agent for providing functions usable by the first and second protocol agents to communicate with each other according to a third protocol, the functions provided by the third protocol being a superset of functions provided by the first and second IP telephony protocols, said interworking agent further adapted to determine that a first parameter associated with the first IP telephony protocol does not map to the second IP telephony protocol and communicating first parameter to the second protocol**” and “**a [first / second] protocol agent for communicating with a [first / second] internet protocol (IP) telephony device according to a [first / second] IP telephony protocol**” to have their **plain meaning**.

VII. CONCLUSION

The Court adopts the constructions set forth in this opinion for the 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 6th day of August, 2015.


ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE