

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

ESN, LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	CIVIL ACTION NO. 5:08-CV-20 DF
	§	
CISCO SYSTEMS, INC., and,	§	
CISCO-LINKSYS, LLC,	§	
	§	
Defendants.	§	

CLAIM CONSTRUCTION ORDER

Before the Court is Plaintiff’s Opening Claim Construction Brief, Defendants’ Opposition, Plaintiff’s Reply, and Defendants’ Sur-Reply. Dkt. Nos. 68, 70, 78, and 83, respectively. The Court held a technical tutorial on June 10, 2009, and a claim construction hearing on June 11, 2009. At the commencement of the claim construction hearing, the Court provided the parties with preliminary claim constructions for six of the disputed terms. The parties agreed to two of the Court’s preliminary constructions, as described below. Upon considering the briefing, arguments of counsel, and all relevant papers and pleadings, the Court construes the remaining disputed terms as described herein.

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I. BACKGROUND

Plaintiff asserts claims 9, 10, 12, and 16 of U.S. Patent No. 7,283,519 (“the ’519 Patent” or “the patent-in-suit”). The patent-in-suit relates to Voice over Internet Protocol (“VoIP”) telephony and, in particular, providing VoIP telephony services with minimal central infrastructure. For example, a telephone in a residence can connect to a telephone in a different residence directly over the Internet. That is, call set-up and control need not be performed by centralized equipment, such as at a service provider’s central office. The ’519 Patent discloses using an “edge switch” that implements “Session Initiation Protocol” (“SIP”), which facilitates the set-up and control of communications sessions, such as a VoIP telephone call, in a peer-to-peer fashion. The “edge switch” can be a device on the “edge” of an IP network that connects the IP network to a subscriber’s devices, such as telephones and computers. ’519 Patent at 37:29-40:22, esp. at 38:15-34. For example, an edge switch can connect a traditional telephone to the Internet for VoIP use. Claim 9 recites:

9. A network device comprising; [*sic*, :]
 - a broadband network interface;
 - a plurality of interfaces, including a telephone line interface and a computer data interface;
 - a processor; and
 - a machine-readable storage medium that stores processor-executable instructions to provide SIP agents, the instructions causing the network device to provide a SIP user agent to represent a non-SIP telephone that uses the telephone line interface, and
 - the instructions further causing the network device to implement a SIP proxy server that mediates all SIP communications over the broadband network interface involving the non-SIP telephone.

Claim 10 recites:

10. The network device of claim 9, wherein the computer data interface passes IP data.

Claim 12 recites:

12. The network device of claim 9, wherein the network device is contained in a single physical enclosure.

Claim 16 depends from claim 13, which recites:

13. A method for establishing a voice-over-packet network architecture, the method comprising:
 locating a system management platform in a shared packet network, the system management platform collecting call log data fro[m] a plurality of network devices; and
 distributing the plurality of network devices that each include
 a telephone line interface,
 a computer data interface,
 a broadband network interface terminating a link from the shared packet network,
 a processor, and
 a machine-readable storage medium storing processor-executable instructions to control telephone calls, the instructions causing each network device to route telephone calls in a peer-to-peer fashion over the shared packet network and to send call log data to the system management platform.

Claim 16 recites:

16. The method of claim 13, wherein the storage medium further stores processor-executable Instructions to act as an SIP proxy server for devices using the telephone line interface and for devices using the computer data interface.

The parties submitted the following disputed terms:

- (1) “network device” (Claims 9, 10, 12, and 16)
- (2) “telephone line interface” (Claims 9, 10, 12, and 16)
- (3) “computer data interface” (Claims 9, 10, 12, and 16)
- (4) “SIP” (Claims 9, 10, 12, and 16)
- (5) “SIP agents” (Claims 9, 10, and 12)

- (6) “SIP user agent” (Claims 9, 10, and 12)
- (7) “the instructions causing the network device to provide a SIP user agent to represent a non-SIP telephone that uses the telephone line interface” (Claims 9, 10, and 12)
- (8) “SIP proxy server” (Claims 9, 10, 12, and 16)
- (9) “SIP proxy server that mediates all SIP communications over the broadband network interface involving the non-SIP telephone” (Claim 9)
- (10) “system management platform” (Claim 16)
- (11) “shared packet network” (Claim 16)
- (12) “route telephone calls in a peer-to-peer fashion over the shared packet network” (Claim 16)
- (13) “SIP proxy server for devices using the telephone line interface and for devices using the computer data interface” (Claim 16)

The Court held a hearing on June 11, 2009. Upon commencement of the hearing, the Court provided the parties with preliminary constructions for the terms numbered (1), (2), (3), (11), (12), and (13), above. The parties agreed to the Court’s preliminary constructions for terms (3) and (12), “computer data interface” and “route telephone calls in a peer-to-peer fashion over the shared packet network,” discussed below.

II. LEGAL PRINCIPLES OF CLAIM CONSTRUCTION

A determination of patent infringement involves two steps: first, the patent claims are construed, and, second, the claims are compared to the allegedly infringing device. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (en banc). The legal principles of claim construction were reexamined by the Federal Circuit in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). The Federal Circuit in *Phillips* expressly reaffirmed the

principles of claim construction as set forth in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996), *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), and *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111 (Fed. Cir. 2004). Claim construction is a legal question for the courts. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996).

The Court construes the disputed terms in accordance with the doctrines of claim construction which it has outlined here along with those it has enunciated in the past. *See Pioneer Corp. v. Samsung SDI Co.*, No. 2:07-CV-170, Dkt. No. 94, at 2-8 (E.D. Tex. Mar. 10, 2008).

III. DISCUSSION

1. “network device” (Claims 9, 10, 12, and 16)

a. The Parties’ Positions

Plaintiff proposes that a “network device” is a “collection of hardware and software, connected to a network, which together make up a single logical node on the network.” Dkt. No. 68 at 9.¹ Defendants propose that this term means “[a] single piece of equipment that transmits and receives data over the broadband network.” Dkt. No. 70 at 11.

Plaintiff argues that the “network device” need not be a single piece of equipment because it need not be “contained within a single physical enclosure,” as demonstrated by claim differentiation with respect to Claim 12. Dkt. No. 68 at 10.

Defendants argue that the patent describes and “consistently depicts the claimed edge

¹ References to page numbers are as-docketed rather than document page numbers.

switch Network Device as a single piece of equipment.” Dkt. No. 70 at 11. Defendants also submit that “logical node,” proposed by Plaintiff, appears nowhere in the patent and is unclear. *Id.* at 13. Defendants further respond that “a single piece of equipment can have multiple enclosures,” such as a telephone with a handset that is separate from a base station. *Id.* at 13.

Plaintiff replies by emphasizing Defendants’ statement that “a Network Device that includes several hardware subcomponents may be in multiple physical enclosures if a manufacturer chooses to construct the device in that manner.” Dkt. No. 78 at 7 (citing Dkt. No. 70 at 13).

At the claim construction hearing, the Court provided the parties with the following preliminary construction: “a hardware device configured to transmit and receive data over a broadband network.” The parties felt that this preliminary construction left ambiguity as to what a network device includes from a physical perspective and from a network perspective.

b. Discussion

The term “network device” appears primarily in the claims and the summary thereof. In addition, the “Ethernet Hub [9]” is defined as having “network devices plugged into it using Ethernet technology or the equivalent.” ’519 Patent at 61:38-47. Similarly, “Ethernet Switch [20] is defined as “enabl[ing] data communications to occur between all network devices plugged into it at the same time.” *Id.* at 64:63-65:3. Because “plugged into” refers to a physical connection, the specification indicates that “a network device” at least includes hardware. However, the specification does not indicate that such a device is necessarily contained within a single physical enclosure, and claim differentiation is consistent with such a finding. ’519 Patent at Claim 12 (“The network device of claim 9, wherein the network device is contained in a single

physical enclosure.”). Plaintiff’s proposal of “single logical node,” however, is similarly unsupported by language in the patent, but the specification indicates that a network device transmits and receives data over a broadband network. The specification also uses the constituent term “device” to refer to a physical unit. ’519 Patent at 16:7-10 (“Embedding most subscriber-oriented features into a very low-cost device (EDGE SWITCH) that is physically replaced if an error condition is detected rather than repaired”). Although such a physical unit may include more than one enclosure, the specification (as well as the arguments of the parties at the claim construction hearing) indicates that a “network device” is treated, *i.e.*, regarded, as a single element in its interactions with the broadband network:

EDGE SWITCH [1]

DES system element that is a hardware device used to terminate IP-based voice, video, and data broadband network service at the network subscriber (customer) premise. It is deployed as a *premise-based network element at the carrier point of demarcation* where outside wiring connects to inside wiring, and functions as an integral service delivery component of the IP CARRIER NETWORK [6].

Id. at 37:29-36 (emphasis added); *see also* “edge switch [1]”, *id.* at FIGS. 4-6, 8. The Court construes the term “network device” to mean “a hardware device configured to transmit and receive data over a broadband network, wherein the broadband network regards the network device as a single network element.”

2. “telephone line interface” (Claims 9, 10, 12, and 16)

a. The Parties’ Positions

Plaintiff proposes that this term means “a hardware subcomponent that provides a physical interface for connecting non-IP telephones (telephones that do not natively support IP network signaling) to the network device” and that “a ‘telephone line interface’ converts

device-level telephone signals to/from digitally encoded audio streams and digitally encoded device states (e.g., off-hook, on-hook, and dialed digits.)” Dkt. No. 68 at 11. Defendants propose that this term means a “[h]ardware subcomponent of the network device that is used to connect telephone stations that do not support IP protocols.” Dkt. No. 70 at 14.

Plaintiff submits that the ’519 Patent defines this term. Dkt. No. 68 at 11, citing ’519 Patent at 23:4-8 and 42:46-52. At the claim construction hearing, Plaintiff also urged that this term should be construed to include device-level signaling, such as conveying whether a telephone is on-hook or off-hook. As support, Plaintiff cited a portion of the specification stating that non-SIP telephone stations require “assistance”: “TELEPHONE STATIONS [3] do not natively support SIP network signaling and as a result cannot present themselves to an IP network as SIP network signaling endpoints without assistance from the EDGE SWITCH [1].” ’519 Patent at 42:48-52. Plaintiff submits that this “assistance” includes device-level signaling.

Defendants agree that the patent defines this term but argues that Plaintiff improperly imports a limitation from a disclosed embodiment by seeking to add the additional limitation that a telephone line interface must be able to ‘convert[] device-level telephone signals to/from digitally encoded audio streams and digitally encoded device states.’” Dkt. No. 70 at 15.

In reply, Plaintiff emphasizes the ’519 Patent at 23:4-8, which states that “[t]he TELEPHONE LINE INTERFACE [1.9] converts device-level telephone signals (e.g. POTS telephone signals) to/from digitally encoded audio streams and digitally encoded device states (e.g. off-hook, on-hook, DTMF digits).” Dkt. No. 78 at 7 (quoting ’519 Patent at 23:4-8).

At the claim construction hearing, the Court provided the parties with the following preliminary construction: “a hardware subcomponent of the network device that can be used to

connect non-IP telephones to the network device.” The parties were in substantial agreement with the preliminary construction except as to whether device-level signaling should be included in the Court’s construction.

b. Discussion

The “DEFINITION[.]” of “TELEPHONE LINE INTERFACE [1.9]” in the specification indicates that this term refers to a “hardware subcomponent” that can be “adapted to support a variety of proprietary telephones, such [as] analog POTS² telephones, digital PBX³ telephones and various Centrex telephones” and can support many functions for POTS telephones. ’519 Patent at 37:4 and 42:45-43:5; *see also Philips*, 415 F.3d at 1316 (“[T]he specification may reveal a special definition given to a claim term [T]he inventor’s lexicography governs.”) Because the telephone line interface can be configured to support various types of phones, this term should not be limited to require the “converts” language proposed by Plaintiff. Device-level signaling, however, is included within the specification’s definition of “telephone line interface”:

If used to connect POTS telephones, the TELEPHONE LINE INTERFACE supports many of the BORSCHT functions, including: (B) Battery feed to power the subscriber's telephone, (R) Ringing signal to the subscribers telephone, (S) *Supervision to detect caller off-hook, calls in progress, calls terminated*, (C) Coding of analog voice signals into PCM digital format, (H) Hybrid transformer for conversion from two-wire to four-wire, and filtering to provide impedance match to remove or minimize echoes, and (T) Testing of the local loop and circuits of the switching equipment to detect faults and provide maintenance.

Id. at 42:57-67 (emphasis added). Despite the qualification “[i]f used to connect POTS telephones,” the definition of “TELEPHONE LINE INTERFACE [1.9]” explains that the

² Plain Old Telephone Service (“POTS”)

³ Private Branch Exchange (“PBX”)

telephone line interface supports non-SIP telephones:

Hardware subcomponent of the EDGE SWITCH [1] integrated with external cabling interface that is *used to connect TELEPHONE STATIONS [3]*. TELEPHONE STATIONS [3] do not natively support SIP network signaling and as a result *cannot present themselves to an IP network as SIP network signaling endpoints without assistance from the EDGE SWITCH [1]*.

Id. at 42:46-52 (emphasis added). The specification thus teaches that the telephone line interface must be configured to support at least some device-level signaling so as to facilitate non-SIP telephones in presenting themselves as “SIP network signaling endpoints.” *Id.* The Court therefore construes “telephone line interface” to mean “a hardware subcomponent of the network device that can be used to connect non-IP telephones to the network device and that can support device-level signaling.”

3. “computer data interface” (Claims 9, 10, 12, and 16)

At the June 11, 2009 hearing on claim construction, the parties agreed to the Court’s preliminary construction of “computer data interface” to mean “hardware subcomponent of the network device that is used to connect one or more computer workstations to support bidirectional IP data communication between the network device and the computer devices.” This term is accordingly so construed.

4. “SIP” (Claims 9, 10, 12, and 16)

a. The Parties’ Positions

Plaintiff proposes that “[t]he term SIP is shorthand for Session Initiation Protocol, which is a communications protocol for creating, modifying and terminating sessions with one or more participants. These sessions may include Internet telephone calls, Internet multimedia conferences, and other types of multimedia distribution.” Dkt. No. 68 at 12. Defendants propose that this term refers to “Session Initiation Protocol as set forth in IETF RFC 2543.” Dkt. No. 70 at 16.

Plaintiff cites a definition of “SIP” in “RFC 2543” and discusses industry adoption of SIP. Dkt. No. 68 at 13-14 (citing Dkt. No. 68, Ex. B at 2). “RFC 2543” refers to “Request for Comments: 2543,” titled “SIP: Session Initiation Protocol,” dated March 1999. *See id.* at 13 and Ex. B; *see also* <http://www.ietf.org/rfc/rfc2543.txt> (last visited June 26, 2009).

Defendants cite language in the ’519 Patent that identifies RFC 2543. Dkt. No. 70 at 16-17 (citing ’519 Patent at 44:46-50 and 62:38-39). Defendants also cite the provisional patent application incorporated by reference into the ’519 Patent, which in turn cites another patent application that purportedly defined SIP as RFC 2543. *Id.* at 17. Defendants argue that Plaintiff’s proposal is too broad because it would “cover any protocol used for establishing network communications sessions,” including SIP protocols promulgated after the application was filed. *Id.* at 19. Defendants submit that “[t]he evolution of the meaning of a claim term after the application for the patent-in-suit cannot enlarge the scope of the patent to embrace technology arising after its filing.” *Id.* at 20 (citing *Schering Corp. v. Amgen, Inc.*, 222 F.3d 1347, 1353 (Fed. Cir. 2000), and *Display Link Corp. v. Magic Control Tech. Corp.*, 2009 WL 593430

(N.D. Cal. Mar. 5, 2009)).

Plaintiff replies that RFC 2543 “never went beyond a ‘Proposed Standard’ and did not reach ‘Draft Standard’ or ‘Standard’ status. Dkt. No. 78 at 5. Plaintiff proposes that “[a]s a Proposed Standard, RFC 2543 is a relevant piece of extrinsic evidence, but it would be highly improper to require every implementation detail to be met perfectly.” *Id.* at 8. Plaintiff submits that “SIP” is not limited to “RFC 2543” because, for example, “if a transparent implementation detail could be improved upon, there would be no harm [e.g., to interoperability] in making such an improvement.” *Id.* at 9.

In sur-reply, Defendants argue that RFC 2543 was on a Standards Track as a Proposed Standard at the relevant time and has been considered a standard, as contrasted with Informational or Experimental RFCs. Dkt. No. 83 at 4-5. Defendants also submit that by 2001, RFC 2543 “had been well accepted as an industry standard by the VoIP community.” *Id.* at 5. But regardless of whether RFC 2543 is a standard, Defendants argue, “the ‘519 Patent and its prosecution history define the claim term ‘SIP’” as the protocol disclosed in RFC 2543. *Id.* at 6.

b. Discussion

A patentee can incorporate or reference a standards document in a specification and in claims, and the Court should construe the claims in light of such standards documents to the extent so incorporated or referenced. *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1375 (Fed. Cir. 2006) (“Although we have concluded that the patentee did not expressly adopt the definition of ‘requesting agent’ in the incorporated industry standard, that standard remains relevant in determining the meaning of the claim term to one of ordinary skill in the art at the time the patent application was filed, and it is treated as intrinsic evidence for claim construction

purposes.”) (citation omitted); *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1380 (Fed. Cir. 2005) (“Rhodia chose to define the term ‘dust-free and non-dusting’ solely by reference to characteristics of the prior art and the only comparison of those characteristics was explained according to the DIN 53 583 standard. It was not improper for the district court to limit the scope of this relative term to the only disclosure on the subject made in the patent.”)

Defendants argue that the ’519 Patent incorporates RFC 2543 as a whole. The ’519 Patent itself references RFC 2543 twice:

SIP PROTOCOL STACK [1.16]

Software subcomponent in the EDGE SWITCH [1] that implements support for the “SIP Proxy Server” functionality described further in this disclosure (see SIP PROXY SERVER [12]) and in *IETF RFC 2543 on SIP: Session Initiation Protocol (SIP)*.

* * *

According to *IETF RFC 2543 on SIP: Session Initiation Protocol* a SIP PROXY SERVER is defined as follows:

“An intermediary program that acts as both a server and a client for the purpose of making requests on behalf of other clients. Requests are serviced internally or by passing them on, possibly after translation, to other servers. A proxy interprets, and, if necessary, rewrites a request message before forwarding it.”

’519 Patent at 44:46-50 and 62:38-39 (emphasis added). Defendants assert that these references to “SIP” in the context of RFC 2543 indicate that “the ’519 patent defines SIP as the protocol described in that [RFC] document.” Dkt. No. 70 at 17. However, upon a fair reading these passages from the specification refer to usage of particular terms in RFC 2543 and do not incorporate RFC 2543 as a whole.

The ’519 Patent claims priority to “U.S. provisional application 60/283,888 [(the “’888 application”)] filed on Apr. 13, 2001, the contents of which are incorporated herein by reference.” *Id.* at 1:7-9. The ’888 application, in turn, defers to another patent application,

“60/185[,]549” (the “’549 application”):

NOTE: System element definitions will defer to definitions found in U.S. Patent Application titled “*Apparatus and Method for Telephony Service Interface to Software Switch Controller*” (Girard, Gregory D., U.S. and foreign patents pending Jan. 2000, serial #60/185[,]549). In the text below, certain references to this body of work may be referenced using the abbreviation [*sic*] “SIP-TSI.”

Dkt. No. 70, Ex. J at 4. The ’549 application is another provisional application, and Defendants identify two portions that refer to RFC 2543. First, the ’549 application states that “RFC 2543 on *Session Initiation Protocol*¹ (SIP) is a call control and signaling protocol that is unique in its ability to interoperate seamlessly across multiple telephony connectivity domains.” Dkt. No. 70, Ex. K at 4 (superscript “1” in original). Second, the ’549 application refers to “Definitions” provided in RFC 2543 and to RFC 2543 as a whole:

All terminology used in this document are [*sic*] consistent with the “Definitions” provided in section 1.3 of RFC 2543 on *Session Initiation Protocol* (SIP). The terms “apparatus” and “method” are shown in italics when they refer specifically to the “METHOD AND APPARATUS FOR TELEPHONY SERVICE INTERFACE TO SOFTWARE SWITCH CONTROLLER.” This document discloses only a minimum amount of information required to derive a functional implementation of the *apparatus*, operating in accordance with the disclosed *method*. Implementation details set forth reveal only design considerations directly related to constructing the barest framework of *apparatus* and *method*; no attempt is made in this document to describe implementation of dependent foundation protocols such as SIP. In consideration of space, details have been omitted from certain discussions, such as implementation of conferencing algorithms or descriptions of all possible response messages for a given request. Example message flows and procedure outlines describe ideal cases and do not necessarily contain detailed explanations for all error conditions or every possible contingency. The *method* disclosed is extensible enough to support a variety of implementations. It is the intent of the *method* to provide telephony applications with a richer set of functions than is possible using SIP alone. It is left to the implementer to determine how low-level telephony functions will be exposed to the telephony application using this *method* i.e. the method neither requires nor suggests any particular Application Programmer Interface. A full specification for the purpose of implementing the *apparatus* will require a litany of existing and proposed standards found in section 3, “References”.

Id. at 5 (underlined emphasis added). The “References” section of the ’549 application includes “[1] Handley M, Schulzrinne M, Schooler E, Rosenberg J (March 1999) *RFC 2543 on SIP: Session Initiation Protocol*, Internet Engineering Task Force.” *Id.* at 6. The bracketed “[1]” appears to refer to the superscript “1” that follows “*Session Initiation Protocol*” quoted above, especially in light of a similar use of a superscript “4” in the ’549 application. *See id.* at 4-6. Thus, the ’549 application appears to define “*Session Initiation Protocol (SIP)*” by reference to RFC 2543. Also, the above-quoted statement that “no attempt is made in this document to describe implementations of dependent foundation protocols such as SIP” would direct a person of ordinary skill to refer to RFC 2543 to understand “SIP.” Dkt. No. 70, Ex. K at 5.

Moreover, the ’549 application states, as quoted above, that “implementing the *apparatus* will require” the “References,” one of which is RFC 2543. RFC 2543 is thus identified as a whole, that is, without limitation to any particular portions thereof. Further, the italicized “*apparatus*” refers to the apparatus of the “METHOD AND APPARATUS FOR TELEPHONY SERVICE INTERFACE TO SOFTWARE SWITCH CONTROLLER,” which is the title of the ’549 application.⁴ The applicant’s reference to the title of the application when using the italicized terms “*apparatus*” and “*method*” suggests that the applicant intended such italicized usage to refer to the purportedly inventive subject matter disclosed in the ’549 application. Finally, the ’549 application offers that “[t]he disclosed ‘APPARATUS AND METHOD FOR

⁴ The ’549 patent is titled “APPARATUS AND METHOD FOR TELEPHONY SERVICE INTERFACE TO SOFTWARE SWITCH CONTROLLER.” Dkt. No. 70, Ex. K at 3. Although the above-quoted passage refers to “METHOD AND APPARATUS . . .,” the ’549 application elsewhere refers to “APPARATUS AND METHOD . . .,” which suggests that the words “method” and “apparatus” were merely transposed in the above-quoted passage without any intent to alter meaning.

TELEPHONY SERVICE INTERFACE TO SOFTWARE SWITCH CONTROLLER’ builds upon the SIP model so as to incorporate essential telephony application functions that are available using a PSTN telephony service interface.” *Id.* at 4. The ’549 application and, in turn, the ’888 application and the ’519 Patent, thus indicate that a person of ordinary skill in the art attempting to implement the disclosed subject matter would need to refer to RFC 2543 as a whole.

The parties disputed at length in their briefing and at the claim construction hearing whether RFC 2543 is a true “standard,” but the Court need not resolve this issue for at least two reasons. First, to the extent RFC 2543 was adopted in the communications industry and known to persons of ordinary skill in the art at the relevant time, such a person reading the ’519 Patent would interpret “SIP” and related claim terms in light of knowledge of RFC 2543. Second, and more importantly, the ’519 Patent incorporates RFC 2543 in its entirety, as discussed above, so RFC 2543 is intrinsic evidence for claim construction purposes regardless of whether RFC 2543 was adopted as a “standard” in industry. *See LG*, 453 F.3d at 1375.

Although SIP has been an evolving protocol, as evidenced by the publication of RFC 3261 in June 2002 (*see* Dkt. No. 68 at Ex. C), for example, “this court must determine what the term meant at the time the patentee filed the . . . application.” *Schering*, 222 F.3d at 1353. The Court therefore does not consider RFC 3261, which was published after the filing of the application that led to the ’519 Patent and which is not referenced by the ’519 Patent.

Plaintiff emphasized at the claim construction hearing that including Defendants’ proposed language “as set forth in IETF RFC 2543” or “in accordance with IETF RFC 2543” would be problematic and unfair because, Plaintiff argues, Defendants could ambush Plaintiff by

bringing limitations into the claims from anywhere in the 153-page RFC 2543 at any time. Because RFC 2543 has been incorporated into the '519 Patent, the Court construes the claims in light of RFC 2543. Because RFC 2543 is not recited in the claims, construing the claims to include the “as set forth in” or “in accordance with” language proposed by Defendants would thus be tantamount to construing a term to include “as set forth in the specification.” Construing a term in this manner would be an abdication of the Court’s responsibility to construe claims as a matter of law. *See Markman*, 517 U.S. at 391; *but see Chimie*, 402 F.3d at 1380.

Although the *Chimie* court included a reference to a measurement standard (“DIN 53 583”) in its construction even though the claims did not recite that standard, the *Chimie* court found that the specification provided no other guidance for interpreting “dust-free and non-dusting.” *Id.* at 1375 and 1380. The present case, by contrast, does not require any testing or measurement of an elusive quantity like “dustiness” in order to construe “SIP.” *Id.* Instead, “SIP” refers to a protocol, which the '519 Patent and RFC 2543 describe in a manner amenable to construction. The Court therefore declines to include explicit references to RFC 2543 in its constructions. Instead, the Court reads RFC 2543 as intrinsic evidence, *i.e.*, the Court interprets the claims as if RFC 2543 were reproduced in its entirety in the specification of the '519 Patent.⁵

The Abstract of RFC 2543 includes: “The Session Initiation Protocol (SIP) is an application-layer control (signaling) protocol for creating, modifying and terminating sessions with one or more participants.” Dkt. No. 68, Ex. B at 2. Although Plaintiff cites this language, Plaintiff’s proposal refers to SIP as a “communication” protocol rather than an “application-layer

⁵ The Court accordingly interprets the disputed terms in light of a full review of RFC 2543 but especially in light of portions addressed by the parties briefing.

control (signaling) protocol.” Dkt. No. 68 at 13. Defendants characterize SIP as “a signaling protocol for establishing calls over a packet network.” Dkt. No. 70 at 16. Although RFC 2543 once refers to “SIP communications” (RFC 2543 at 9), the language of the first sentence of the Abstract of RFC 2543 better comports with that document’s description of SIP as a “control” or “signaling” protocol, as well as with the ’519 Patent’s disclosure of “SIP signaling.” *See, e.g.*, ’519 Patent at Claim 15, 7:58-7:61 (“network signaling protocols like SIP”), and 63:25-29 (“By exchanging SIP messages with the SIP PROXY SERVER [12] (through the SIP signaling path created to support a call session), the application program responsible for controlling a call session may perform complex call control operations . . .”). Such an interpretation also better comports with the term “SIP” itself: Session *Initiation* Protocol. Finally, the Court rejects Plaintiff’s proposal to include examples of types of sessions, even though given in the Abstract of RFC 2543, because such examples of embodiments do not limit the term. The Court therefore construes the term “SIP” to mean “Session Initiation Protocol, which is an application-layer control (signaling) protocol for creating, modifying and terminating sessions with one or more participants.”

5. “SIP agents” (Claims 9, 10, and 12)

a. The Parties’ Positions

Plaintiff proposes this term means “a software entity that provides a SIP function and acts on behalf of a person, thing or other software entity. A SIP user agent and a SIP proxy server are examples of SIP agents.” Dkt. No. 68 at 14. Defendants propose that this term is indefinite. Dkt. No. 70 at 21.

Plaintiff cites a telecommunications dictionary definition of “agent” and cites usage in the

claims of “SIP user agent” and “SIP proxy server,” as well as the definition in the ’519 Patent of “SIP proxy server,” as instructive. Dkt. No. 68 at 14-15. Plaintiff submits that “a SIP proxy meets the classic definition of ‘agent’ since it is a software program that acts ‘on behalf of other clients.’” *Id.* at 15.

Defendants argue that this term “is neither used nor defined in the specification, it does not have an ordinary meaning, and it is not a term of art that is discernable to one of ordinary skill in the art. Dkt. No. 70 at 21. The term is therefore indefinite, Defendants conclude, because “[t]here is simply no means by which a person of skill in the art would be able to determine the term ‘SIP Agent.’” *Id.* at 22. Defendants also urge that even though the terms “SIP” and “agent” are collectively defined in either the RFC 2543, the ’519 Patent, or a dictionary, combining definitions of constituent words is not appropriate. *Id.* at 22 (citing *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1359-60 (Fed. Cir. 2005), and *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004)).

Plaintiff replies that a claim is indefinite only if “insolubly ambiguous,” and Plaintiff argues that “usage of the term SIP agent in claim 9 comports to the letter with the classic definition of ‘agent,’” i.e., “an entity acting on behalf of another.” Dkt. No. 78 at 10 (citing *Halliburton Energy Servs. Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008)).

b. Discussion

Indefiniteness is a “legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Exxon Research & Eng’g Co. v. U.S.*, 265 F.3d 1371, 1376 (Fed. Cir. 2001) (quotation omitted). Further, a finding of indefiniteness must overcome the statutory presumption of validity. 35 U.S.C. § 282. That is, the “standard [for finding

indefiniteness] is met where an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.”

Halliburton, 514 F.3d at 1249-50. Thus, although the term “SIP agents” appears only in Claim 9 and nowhere in the specification or RFC 2543, the Court turns to the relevant intrinsic and extrinsic evidence to attempt to discern a meaning for this term.

Usage in the claims and the specification of the similar term “SIP user agent” suggests that a person of ordinary skill in the art could arrive at a construction of the term “SIP agent,” even though these terms do not appear interchangeable. *See, e.g.*, ’519 Patent at Claims 6 and 9, 13:64-14:7 (“For example, if the calling party is a SIP network signaling endpoint (SIP User Agent)”), and 62:46-50. That is, usage of the words “SIP” and “agent” in the intrinsic evidence would assist a person of ordinary skill in the art in discerning a meaning for “SIP agents” even though the meaning of the term is not immediately apparent from the usage of the term’s constituent words. *See Network Commerce*, 422 F.3d at 1359-61.

Claim 9 recites:

a machine-readable storage medium that stores processor-executable *instructions to provide SIP agents, the instructions causing the network device to provide a SIP user agent* to represent a non-SIP telephone that uses the telephone line interface, and
the *instructions further causing the network device to implement a SIP proxy server* that mediates all SIP communications over the broadband network interface involving the non-SIP telephone.

Id. at 66:12-20. The recitations of “the instructions causing the network device” to “provide a SIP user agent” and “to implement a SIP proxy server” apparently refer for antecedent basis to “instructions to provide SIP agents.” *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1306

(Fed. Cir. 2005) (“[I]t is a rule of law well established that the definite article ‘the’ particularizes the subject which it precedes. It is a word of limitation”) (quotation omitted). Although not explicit, the above-quoted recitation in Claim 9 of “instructions” thus suggests that “SIP agents” include a “SIP user agent” and “a SIP proxy server.”

Claim 9 and other intrinsic evidence thus support Plaintiff’s proposed “on behalf of” language. Claim 9 itself discloses that “a SIP user agent,” which is recited as a type of “SIP agent,” as discussed above, is provided “to represent” a telephone. Section 1.3 of RFC 2543 defines “proxy server,” which is also recited in Claim 9 as a type of “SIP agent,” as “[a]n intermediary program that acts as both a server and a client for the purpose of making requests *on behalf* of other clients.” RFC 2543 at 10. Further, the constituent term “agent” is sufficiently understandable even as used by itself, especially in light of the telecommunications dictionary definition submitted by Plaintiff. Dkt. No. 68, Ex. D at 4 (“The classic definition of an agent is an entity acting on behalf of another.”); see Phillips, 415 F.3d at 1318 (noting that “dictionaries, and especially technical dictionaries,” can be “helpful” evidence for claim interpretation).

The Court therefore construes “SIP agents” to mean “software entities that can provide SIP functionality on behalf of another entity or entities.” Because a meaning for this term can be reasonably discerned based on the intrinsic evidence, this term is not indefinite. *See, e.g., Network Commerce*, 422 F.3d at 1359-61 (noting that claim term “download component” did not appear in specification but nonetheless construing term in light of specification).

6. “SIP user agent” (Claims 9, 10, and 12)

a. The Parties’ Positions

Plaintiff proposes this term means “a SIP network signaling endpoint.” Dkt. No. 68 at

15. Defendants propose this term means “[a]n application which contains both a user agent client and user agent server that operates in accordance with IETF RFC 2543.” Dkt. No. 70 at 23.

Plaintiff argues that “the ‘SIP user agents’ are the endpoints for any SIP protocol message signaling” because SIP user agents operate on behalf of non-SIP telephones and are therefore an endpoint from the perspective of the SIP protocol. Dkt. No. 68 at 17. Defendants cite Plaintiff’s reference to the definition of “user agent” in RFC 2543, arguing that “[t]he appropriate criteria is RFC 2543” and that Plaintiff’s proposed construction would improperly encompass other protocols. *Id.* at 24. Defendants also emphasize that this term must include the functionality of both user agent client and user agent server. *Id.* at 24-25. Plaintiff replies that “[a]s a Proposed Standard, RFC 2543 is a relevant piece of extrinsic evidence, but would be highly improper to incorporate, with its countless limitations, into a claim construction.” Dkt. No. 78 at 11.

At the claim construction hearing, Plaintiff emphasized that the “SIP user agent” should be identified as an “endpoint” because a SIP proxy server, by contrast, also includes a user agent client and a user agent server but is not an endpoint.

b. Discussion

As discussed above, a person of ordinary skill in the art reading the specification and the prosecution history would read the reference to “SIP” to require examination of RFC 2543 to determine whether that document informs the meaning of “SIP User Agent.” Also as discussed above, although the Court declines to include explicit reference to RFC 2543 in its constructions, the Court considers RFC 2543 fully incorporated into the specification. Section 1.3 of RFC 2543, titled “Definitions,” provides the following definition: “User agent (UA): An

application which contains both a user agent client and user agent server.” Dkt. No. 68, Ex. B at 4. Moreover, the ’549 application, to which the ’519 Patent claims priority (by way of the ’888 application), expressly incorporated Section 1.3 of RFC 2543. Dkt. No. 70, Ex. K at 5. The patentee thus acted as lexicographer. *See Philips*, 415 F.3d at 1316 (“[T]he specification may reveal a special definition given to a claim term [T]he inventor’s lexicography governs.”). Because RFC 2543 is a self-described “specification” for SIP, the definition of “User agent” quoted above is understood to refer to a “SIP user agent.” *See RFC 2543* at 9 (“This specification uses a number of terms to refer to the roles played by participants in SIP communications.”)

The specification uniformly uses “SIP user agent” to refer to a network signaling endpoint: 14:2-6 (“For example, if the calling party is a *SIP network signaling endpoint (SIP User Agent)* used by an EDGE SWITCH to represent a POTS telephone at the subscriber premise”) (emphasis added); 25:10-16 (“SET-TOP BOXES [4] are native *SIP network signaling endpoints (i.e. contain a SIP User Agent)* TELEPHONE STATIONS [3] are represented as SIP network signaling endpoints by a SIP User Agent function provided by the ABSTRACT CALL MODEL [1.20].”) (emphasis added); 31:37-40 (“Internally within the EDGE SWITCH [1], TELEPHONE STATIONS [3] plugged into it are represented as SIP User Agent instances by the ABSTRACT CALL MODEL’S [1.20] Telephone Gateway function.”); 44:63-45:1 (“The ABSTRACT CALL MODEL [1.20] supports a telephone gateway function in which a *SIP User Agent is used to perform SIP network signaling endpoint functions* on behalf of each TELEPHONE STATION [3] plugged into the TELEPHONE LINE INTERFACE [1.9].”) (emphasis added); 48:53-67 (describing FIG. 7 as illustrating “near-end” and “far-end” “SIP User

Agent[s]”); and 62:46-54 (“The SIP PROXY SERVER . . . is required to support many SIP network signaling operations within it by *shuttling SIP messages back and forth between two or more SIP User Agents* participating in a SIP call session. Specifically, the SIP PROXY SERVER functions much like an intermediary SIP message router to ensure that the *SIP network signaling messages to/from the SIP endpoints* in the network are ultimately channeled to the correct destination.”) (emphasis added).

These passages, particularly column 25, lines 10-16 (“SET-TOP BOXES [4] are native *SIP network signaling endpoints (i.e. contain a SIP User Agent)*”), indicate that a “SIP User Agent” is a “network signaling endpoint.” See *Abbott Labs v. Novapharm Ltd.*, 323 F.3d 1324, 1327, 1330 (Fed. Cir. 2003) (finding that use of “*i.e.*” defined term); but see *Pfizer, Inc. v. Teva Pharm., USA, Inc.*, 429 F.3d 1364, 1373-75 (Fed. Cir. 2005) (finding “*i.e.*” not limiting where specification provided further explanation of term, noting that “person of ordinary skill in the art is deemed to have read the claim term in the context of the entire patent”). The “context of the entire patent” and RFC 2543 is consistent with this use of “*i.e.*” in the specification. *Pfizer*, 429 F.3d at 1373. That is, the specification does not identify “SIP User Agent” other than in connection with an endpoint, so the use of “*i.e.*” cited above is especially probative of the meaning of “SIP User Agent.” See *Abbott Labs*, 323 F.3d at 1327, 1330 (finding patentee acted as own lexicographer by using “*i.e.*” to define term not known in the art at the time of filing). RFC 2543 defines a “user agent” as including “a user agent client and a user agent server.” Dkt. No. 68, Ex. B at 4. In turn, RFC 2543 defines “User agent client (UAC), calling user agent: A user agent client is a client application that initiates the SIP request.” *Id.* RFC 2543 defines “User agent server (UAS), called user agent: A user agent server is a server application that

contacts the user when a SIP request is received and that returns a response on behalf of the user. The response accepts, rejects or redirects the request.” *Id.* This description of a user (as opposed to a proxy or other intermediary) initiating a request by way of a user agent server and a user (as opposed to a proxy or other intermediary) responding to a request by way of a user agent server is consistent with interpreting “SIP user agent” to refer to a network signaling endpoint. Further, Section 11 of RFC 2543, titled “Behavior of SIP User Agents,” describes requests formulated by a “caller” and responses formulated by a “callee,” which is consistent with usage of “user agent” to refer to network signaling endpoints. RFC 2543 at 95-97. Usage in the specification and RFC 2543 of “user agent” is thus consistent with Plaintiff’s proposal that a “SIP user agent” is a “network signaling endpoint.”

Turning briefly to the claims, Claim 9 recites, in relevant part, “a SIP user agent to represent a non-SIP telephone that uses the telephone line interface.” ’519 Patent at 66:15-20. A “non-SIP telephone” is understood as existing at a network “endpoint,” so the use of “SIP user agent” in claim 9 is consistent with Plaintiff’s proposal that a “SIP user agent” is an endpoint.

The Court therefore construes “SIP user agent” in accordance with the express definition in the specification and RFC 2543 to mean “an application that is a SIP network signaling endpoint and which contains both a user agent client and user agent server.”

7. “the instructions causing the network device to provide a SIP user agent to represent a non-SIP telephone that uses the telephone line interface” (Claims 9, 10, and 12)

- a. The Parties’ Positions

Plaintiff proposes this term means:

The instructions cause the network device to provide a “SIP user agent” (a “SIP

user agent” is a SIP network signaling endpoint) for the purpose of representing a non-IP telephone that is attached to the network device through the telephone line interface. Because the non-IP telephone is not natively capable of direct participation in SIP communications, it relies on the SIP user agent (provided by the network device) to participate in SIP communications on its behalf, thereby enabling the non-SIP telephone to indirectly participate in SIP communications.”

Dkt. No. 68 at 18. Defendants propose this term means that “[s]oftware in the network device provides each telephone station attached to the telephone line interface with a SIP user agent to perform all the required SIP signaling in accordance with IETF RFC 2543.” Dkt. No. 70 at 25.

Plaintiff cites the “role for the SIP user agent [as] discussed throughout the ‘519 Patent specification.” Dkt. No. 68 at 18-19. Defendants argue that “the patent requires the SIP signaling to be in accordance with RFC 2543. Dkt. No. 70 at 25. In reply, Plaintiff again submits that importing RFC 2543 into a claim construction would be improper. Dkt. No. 78 at 12.

b. Discussion

As discussed above, the Court declines to include an explicit reference to RFC 2543 in its construction. Apart from this issue, according to Defendants, “the parties agree that the patent purported to provide a SIP User Agent to perform the required signaling for traditional, Non-SIP Telephones.” Dkt. No. 70 at 25. Passages of the specification cited by Plaintiff disclose that SIP user agents can perform signaling on behalf of non-SIP telephones:

Internally within the EDGE SWITCH [1], TELEPHONE STATIONS [3] plugged into it are represented as SIP User Agent instances by the ABSTRACT CALL MODEL’S [1.20] Telephone Gateway function. *These SIP User Agents are created to operate on behalf of TELEPHONE STATIONS [3] that are by themselves incapable of performing SIP network signaling operations.*

The EDGE SWITCH [1] represents each TELEPHONE STATION [3] internally as a SIP network signaling endpoint to the IP CARRIER NETWORK [6] by

associating it with particular E.164 dialing number that is recognized by the SIP PROTOCOL STACK. The ABSTRACT CALL MODEL [1.20] supports a telephone gateway function in which *a SIP User Agent is used to perform SIP network signaling endpoint functions on behalf of each TELEPHONE STATION [3]* plugged into the TELEPHONE LINE INTERFACE [1.9]. This SIP User Agent directs its SIP network signaling operations to the SIP PROTOCOL STACK, using it as its default SIP Proxy Server.

'519 Patent at 31:37-44 and 44:59-45:3 (emphasis added). Plaintiff thus submits that a SIP User Agent is used to perform SIP network signaling endpoint functions on behalf of non-SIP telephones.

In accordance with the parties' substantial agreement and the evidence submitted, the Court construes the term "the instructions causing the network device to provide a SIP user agent to represent a non-SIP telephone that uses the telephone line interface" to mean "network device software provides each telephone station attached to the telephone line interface with a SIP user agent to perform required SIP signaling."

8. "SIP proxy server" (Claims 9, 10, 12, and 16)

a. The Parties' Positions

Plaintiff proposes that a "SIP proxy server" "is an intermediary program that acts as both a server and a client for the purpose of making SIP requests on behalf of other SIP clients such as a SIP user agent. SIP requests are serviced internally or by passing them on, possibly after translation, to other servers. A SIP proxy interprets, and, if necessary, rewrites a SIP request message before forwarding it." Dkt. No. 68 at 19. Defendants propose this term means "[a]n intermediary program that acts as both a server and a client for the purpose of making requests on behalf of other SIP clients in accordance with IETF RFC 2543." Dkt. No. 70 at 26.

Plaintiff cites "the general intermediary function of the SIP Proxy Server" as described in

the '519 Patent at 31:55-32:3, 44:46-51, 49:12-24, 62:31-37, and Figure 11. Dkt. No. 68 at 21-23. Defendants argue that this term must be construed with reference to RFC 2543, which the '519 patent expressly quotes in defining "SIP proxy server" at column 62, lines 31-45. Dkt. No. 70 at 26 (citing Display Link Corp., 2009 WL 593430 at *4 and *8). Defendants submit that Plaintiff seeks to capture a "Back-to-Back User Agent," which both RFC 2543 and RFC 3261 purportedly state are not SIP proxy servers. *Id.* at 27. Plaintiff replies that Defendants "once again attempt to misconstrue the Internet Standard Process and overreach in characterizing non-essential implementation details of RFC 2543." Dkt. No. 78 at 12. In particular, Plaintiff argues that, with reference to the declaration of Defendants' expert Dr. Burger, Defendants "overreach in characterizing non-essential implementation details of RFC 2543" as essential. *Id.* at 12-13.

b. Discussion

As discussed above, the Court declines to include an explicit reference to RFC 2543 in its construction but considers RFC 2543 as intrinsic evidence incorporated into the specification. The Court finds consideration of Dr. Burger's declaration unnecessary to construe "SIP proxy server."

The '519 Patent, in its "DEFINITIONS" section, expressly quotes from RFC 2543 in defining "SIP PROXY SERVER [12]":

According to IETF RFC 2543 on SIP: Session Initiation Protocol a SIP PROXY SERVER is defined as follows:

"An intermediary program that acts as both a server and a client for the purpose of making requests on behalf of other clients. Requests are serviced internally or by passing them on, possibly after translation, to other servers. A proxy interprets, and, if necessary, rewrites a request message before forwarding it."

The SIP PROXY SERVER is a component in the DES reference carrier network

architecture and is required to support many SIP network signaling operations within it by *shuttling SIP messages back and forth between two or more SIP User Agents* participating in a SIP call session.

Specifically, *the SIP PROXY SERVER functions much like an intermediary SIP message router to ensure that the SIP network signaling messages to/from the SIP endpoints in the network are ultimately channeled to the correct destination.* In this message-routing capacity, several SIP PROXY SERVERS can cooperate to pass SIP network signaling messages bi-directionally through a hierarchy of SIP PROXY SERVERS, each of which gets it closer to the target endpoint. SIP PROXY SERVERS access both the DNS SERVER [10] and the POLICY SERVER [14] to determine how to route SIP call sessions within the IP CARRIER NETWORK [6].

'519 Patent at 62:38-61 (emphasis added). The patentee thus acted as lexicographer and defined the term "SIP proxy server" within the specification itself. *See Philips*, 415 F.3d at 1316 ("[T]he specification may reveal a special definition given to a claim term [T]he inventor's lexicography governs."). Defendants argument regarding whether the claim covers a "Back-to-Back User Agent" is directed to questions of infringement and is therefore not a proper subject for claim construction. *See Embrex, Inc. v. Serv. Eng'g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000) ("In claim construction the words of the claims are construed independent of the accused product, in light of the specification, the prosecution history, and the prior art."). Such arguments should be handled in the context of summary judgment or trial.

The Court construes the term "SIP proxy server" in accordance with the express definition in the specification, including a clarification that the "requests" are "SIP requests," to mean: "An intermediary program that acts as both a server and a client for the purpose of making SIP requests on behalf of other clients. Requests are serviced internally or by passing them on, possibly after translation, to other servers. A proxy interprets, and, if necessary, rewrites a request message before forwarding it."

9. “SIP proxy server that mediates all SIP communications over the broadband network interface involving the non-SIP telephone” (Claim 9)

a. The Parties’ Positions

Plaintiff proposes that this term means:

The instructions cause the network device to implement a SIP proxy server that acts as an intermediary for SIP communications between a SIP user agent representing a non-SIP telephone attached to the telephone line interface and a remote SIP endpoint (e.g., telephone) accessible by way of routing SIP communications over the broadband network interface. The requirement that the “SIP proxy server mediate all SIP communications over the broadband network interface involving the non-SIP telephone” means that the SIP proxy server must control SIP telephone call sessions involving the non-SIP telephone by (1) making SIP signaling events available to a telephone call control function and (2) translating E.164 numbers into IP addresses (as required to establish SIP call sessions).

Dkt. No. 68 at 24. Defendants propose this term requires no construction apart from construction of constituent phrases and ordinary meaning. Dkt. No. 70 at 28.

Plaintiff argues that its proposed construction properly explains the “mediates” language in this term in accordance with the role of the SIP proxy server as described in the specification.

Dkt. No. 68 at 24-27.

Defendants submit that the parties have stipulated to the constructions of “non-SIP telephone” and “Broadband Network Interface” and that the meaning of “mediate” is “[t]o act as an intermediary.” Dkt. No. 70 at 28-29 (citing American Heritage Dictionary (Fourth Edition 2001), Dkt. No. 70, Ex. Q). Defendants argue that Plaintiff lacks support for its proposal that SIP communication must take place “between a SIP user agent representing a non-SIP telephone . . . and a *remote (off premise) SIP endpoint* (e.g., telephone) accessible over the broadband network.” *Id.* at 29 (emphasis added). Defendants also argue that Plaintiff’s proposed language

requiring “making SIP signaling events available to a telephone call control function” and “translating E.164 numbers into IP addresses” describes an embodiment and should not be imported into the claim. *Id.* Finally, Defendants argue that Plaintiff’s construction “omits the limitation that the claim ‘mediates *all*’ the identified SIP communications.” *Id.* at 30.

Plaintiff replies that Defendants “improperly take[] the term ‘mediates’ out of the context of the claim’s specific recitations of what is being mediated.” Dkt. No. 78 at 14. Plaintiff submits that the patentee has acted as his own lexicographer, albeit not in the “DEFINITIONS” section of the ’519 Patent. *Id.* at 14-15.

At the claim construction hearing, Plaintiff also emphasized that this term cannot refer to managing communications between endpoints on the same premises because the claim recites “communications over the broadband network interface.” Plaintiff also emphasized that “mediates” in this term requires call control and intelligent participation because centralized call control would render the term “mediates” mere surplusage.

b. Discussion

The parties have stipulated that the term “broadband network interface” means:

Hardware subcomponent of the network device that physically connects it to the BROADBAND ACCESS NETWORK, and provides the electrical or optical signaling capability necessary to terminate broadband network access at a premise using, for example, Digital Subscriber Line (DSL), coaxial cable, T1 or Passive Optical Network (PON). The BROADBAND ACCESS NETWORK is the segment of an IP Carrier Network that bridges the “last mile” between the central office and the subscriber premise. It is designed to provide a relatively high-bitrate IP data path to the subscriber premise, with a minimum bit transfer rate of 128 Kbit/second in each direction.

Dkt. No. 90, Ex. at 1. The parties have also stipulated that the term “non-SIP telephone” means “Telephone station, i.e., terminal device that is used for voice communications that does not

support IP protocol.” *Id.* at 4. The Court has construed the term “SIP proxy server,” above. The remaining dispute for the term “SIP proxy server that mediates all SIP communications over the broadband network interface involving the non-SIP telephone” is thus centered on the word “mediates.”

Plaintiff proposes that communications are “between a SIP user agent representing a non-SIP telephone attached to the telephone line interface and a remote SIP endpoint (e.g., telephone) accessible by way of routing SIP communications over the broadband network interface.” In light of the parties agreed construction of “broadband network interface,” above, Plaintiff’s proposed language properly notes that communication occurs over the broadband network. Plaintiff has not shown, however, that such communication could not take place between SIP endpoints that are physically located at common premises but are nonetheless connected through the broadband network (rather than locally connected, such as through a shared broadband network interface or some other local network device).

Plaintiff also proposes that “the SIP proxy server must control SIP telephone call sessions involving the non-SIP telephone by (1) making SIP signaling events available to a telephone call control function and (2) translating E.164 numbers into IP addresses (as required to establish SIP call sessions).” Plaintiff cites three portions of the specification:

RESIDENTIAL GATEWAYS are unintelligent in the sense that they require the MEDIA GATEWAY CONTROLLER to *mediate* all network signaling functions on their behalf. They cannot determine the broader network signaling context of the calling operations in which they participate. They are incapable of independently executing service logic that involves network signaling operations (e.g.[.] call redirection, multipoint call control, call supervision, multiple line appearances, etc.) without centralized participation by the MEDIA GATEWAY CONTROLLER. These factors impose substantial constraints on the variety of network services the NGN can deliver because each new service must be tightly

integrated with the MEDIA GATEWAY CONTROLLER in order to perform call control operations.

Intelligent participation refers to the ability of a connectivity element to operate both as SIP network signaling endpoint and as a *call control agent* capable [of] complex call control operations.

The SIP PROTOCOL STACK [1.16] runs on the CENTRAL PROCESSING UNIT [1.10] and is used by the ABSTRACT CALL MODEL [1.20] to support all SIP network signaling operations. Among other roles, it functions as the default SIP Proxy Server for all voice and video terminals plugged into the EDGE SWITCH [1], *acting an intermediary for all SIP network signaling operations* between those terminal devices and those in the network with whom they are communicating. FIG. 11 depicts this role of the SIP PROTOCOL STACK [1.16] to the extent that the DES as a system functions as a distributed SIP Proxy Server, using the DNS SERVER [10] as a centralized database to translate E.164 dialing numbers into IP addresses (as required to establish SIP call sessions in the ESN[]).

'519 Patent at 8:41-54, 11:55-59, and 24:24-38 (emphasis added).

Plaintiff has not shown that “making SIP signaling events available to a telephone call control function” or “translating E.164 numbers into IP addresses (as required to establish SIP call sessions)” are strictly required rather than being aspects of a preferred embodiment. *See Philips*, 415 F.3d at 1323 (“For instance, although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.”) (citations omitted). For example, the “SIP PROTOCOL STACK” portion of the specification relied upon by Plaintiff appears in the “DETAILED DESCRIPTION” rather than the “DEFINITIONS” or even the “SUMMARY” of the '519 Patent. Also, the “SIP PROTOCOL STACK” is described as the “default SIP Proxy Server” but not as being commensurate with the “SIP Proxy Server.” The description of the “SIP PROTOCOL STACK” relied upon by Plaintiff thus does not limit the meaning of “SIP proxy server” as proposed by Plaintiff.

The Court construes “SIP proxy server that mediates all SIP communications over the

broadband network interface involving the non-SIP telephone” to mean “a SIP proxy server that acts as an intermediary for SIP communications between a SIP user agent representing a non-SIP telephone attached to the telephone line interface and a SIP endpoint accessible by way of routing SIP communications over the broadband network interface.”

10. “system management platform” (Claim 16)

a. The Parties’ Positions

Plaintiff proposes that “[a] ‘system management platform’ is deployed in the shared packet network. The system management platform generally does not participate in voice communications with the network devices, but provides a supporting, administrative role, including collecting call log data from the network devices.” Dkt. No. 68 at 27. Defendants propose this term means a “[p]latform, installed in a carrier central office or equivalent, that provides provisioning, configuration, management and active monitoring of network devices.” Dkt. No. 70 at 30.

Plaintiff argues that “[w]hile the ‘system management platform of the preferred embodiment also may be capable of provisioning and configuring the network devices, claim 16 does not require these procedures to be performed” but instead only requires collecting call log data. Dkt. No. 68 at 28.

Defendants cite a definition of this term in the specification and emphasize that this definition includes “provisioning, configuring, managing, and monitoring the Edge Switch network device.” Dkt. No. 70 at 30-31 (citing ’519 Patent at 56:59-57:2). Defendants argue that Plaintiff’s proposal is too broad because it omits the provisioning, configuring, managing, and monitoring requiring. *Id.* Defendants also argue that Plaintiff’s proposal is too narrow because it

imports a requirement for collecting call log data. *Id.*

In reply, Plaintiff argues that the only function required by Claim 16, by way of Claim 13, is “collecting call log data from a plurality of network devices.” Dkt. No. 78 at 15.

b. Discussion

The specification provides a definition of “SYSTEM MANAGEMENT PLATFORM” as a “network element that functions as the nexus between carrier operations support systems . . . and the EDGE SWITCHES [1] deployed at the subscriber premise” ’519 Patent at 56:62-67; *see also Philips*, 415 F.3d at 1316 (“[T]he specification may reveal a special definition given to a claim term [T]he inventor’s lexicography governs.”). This definition also describes the functionality that Defendants propose, such as functionality to “configure and upload software,” “provision,” “monitor,” “retrieve, view, and modify . . . configuration,” “initiate . . . diagnostics,” “synchronize,” “collect event logs,” and “sort and re-format billable events.” ’519 Patent at 56:58-57:38. The Court therefore construes “system management platform” to mean “a network element that can provide provisioning, configuration, management, and active monitoring of network devices.”

11. “shared packet network” (Claim 16)

a. The Parties’ Positions

Plaintiff proposes this term means:

A “shared packet network” uses packet switching (in contrast to circuit switching) to communicate data (for example, text, sound or video data). Packet switching is a network communications method that splits data into smaller bundles of data, called packets, that are then routed over a network that is shared with other data traffic. Each packet is labeled with its intended destination and a sequence number to allow the packets to be reassembled in the proper order when they reach their destination. The Internet is an example of a shared packet network.

Dkt. No. 68 at 27. Defendants propose this term means a “[p]acket network owned and operated by a telecommunications carrier that is shared by a public subscriber base.” Dkt. No. 70 at 32.

Plaintiff cites a discussion of packet switched networks in a telecommunications dictionary. Dkt. No. 68 at 29 (citing Newton’s Telecom Dictionary, 16th Ed. (Feb. 2000)).

Defendants argue that the ’519 Patent treats “shared packet network” as synonymous with “IP Carrier Network.” Dkt. No. 70 at 32 (citing ’519 Patent at 19:34-35 and Figs. 8 and 9). Defendants then submit that the specification, at 59:60-60:1, defines “IP Carrier Network” as “owned and operated by a telecommunications carrier.” *Id.* at 32. Defendants submit that Plaintiff’s proposal should be rejected for rendering the word “shared” superfluous in “shared packet network.” *Id.* at 33.

Plaintiff replies that the word “shared” is not superfluous because packet switched networks are shared networks, so the word “‘shared’ . . . merely serves to emphasize that the network recited in the claim is a packet switched network.” Dkt. No. 78 at 16. Further, Plaintiff argues that although an IP carrier network is a shared packet network, not all shared packet networks are IP carrier networks. *Id.*

At the claim construction hearing, the Court provided the parties with a preliminary construction of this term to mean:

a network that uses packet switching (in contrast to circuit switching) to communicate data and that can be used by more than one device. Packet switching is a network communications method that splits data into smaller bundles of data, called packets, that are then routed over a network that is shared with other data traffic. Each packet is labeled with its intended destination and a sequence number to allow the packets to be reassembled in the proper order when they reach their destination. The Internet is an example of a shared packet network.

Plaintiff was agreeable to this preliminary construction, but Defendants disagreed and rested on the arguments in their briefing.

b. Discussion

Defendants propose that the construction of this term should include “shared by a public subscriber base.” Dkt. No. 70 at 32. Defendants have not shown, however, that the term “shared” should be limited to require multiple subscribers rather than merely multiple devices. That is, Defendants have not shown that a “shared packet network” cannot be “shared” in the sense of multiple devices of a single subscriber using the same shared packet network. The term “shared” is thus given effect in construction of this term by noting that a “shared packet network” is a packet network that is shared among a plurality of devices. The Court also finds that Plaintiff’s proposed explanatory language would be helpful to understanding this term, and Defendants do not appear to dispute this language. *See* Dkt. No. 70 at 32-33.

The Court therefore construes “shared packet network” to mean “a network that uses packet switching (in contrast to circuit switching) to communicate data and that can be used by more than one device. Packet switching is a network communications method that splits data into smaller bundles of data, called packets, that are then routed over a network that is shared with other data traffic. Each packet is labeled with its intended destination and a sequence number to allow the packets to be reassembled in the proper order when they reach their destination. The Internet is an example of a shared packet network.”

12. “route telephone calls in a peer-to-peer fashion over the shared packet network”
(Claim 16)

At the June 11, 2009 hearing on claim construction, the parties agreed to the Court’s

preliminary construction of “route telephone calls in a peer-to-peer fashion over the shared packet network” to mean “routing telephone calls to another network device without assistance from the network other than connectivity.” This term is accordingly so construed.

13. “SIP proxy server for devices using the telephone line interface and for devices using the computer data interface” (Claim 16)

a. The Parties’ Positions

Plaintiff proposes:

The instructions cause the network device to implement a SIP proxy server that acts as an intermediary for SIP communications to/from a SIP user agent representing a non-SIP telephone attached to the telephone line interface and SIP devices connected to the network device through the computer data interface. A “SIP proxy server” is an intermediary program that acts as both a server and a client for the purpose of making SIP requests on behalf of other SIP clients such as a SIP user agent. SIP requests are serviced internally or by passing them on, possibly after translation, to other servers. A SIP proxy interprets, and, if necessary, rewrites a SIP request message before forwarding it.

Dkt. No. 68 at 31. Defendants propose this term means “[d]efault SIP proxy server that is used by the SIP user agents representing telephone stations and SIP user agents representing computer workstations to participate in SIP network signaling operations that involve carrier-owned SIP network signaling endpoints.” Dkt. No. 70 at 34.

Plaintiff argues that this term is similar to “SIP proxy server” as used in claim 9 but that Claim 16 “adds the additional requirement that the instructions executing on the network device act as a SIP proxy server for devices using the computer data interface.” Dkt. No. 68 at 32.

Defendants argue the specification requires, for example, that “[t]hese SIP User Agents must utilize the SIP PROTOCOL STACK [1.16] as their default SIP Proxy Server in order to participate in SIP network signaling operations that involve carrier-owned SIP network signaling

endpoints.” Dkt. No. 70 at 35.

Plaintiff replies that Defendants use of the word “default” “improperly relies on a discussion of a preferred embodiment, not on any language in the claim itself.” Dkt. No. 78 at 17.

At the claim construction hearing, the Court provided the parties with a preliminary construction of this term to mean “SIP proxy server that can be used by the SIP user agents representing telephone stations and SIP user agents representing computer workstations to participate in SIP network signaling operations.” Plaintiff argued that the terms “SIP user agents,” “telephone stations,” and “workstations” should be singular rather than plural. Plaintiff also proposed striking the second instance of “SIP user agents representing.” Defendants opposed striking the second instance of “SIP user agents representing” but also argued that the Court’s construction should define the SIP proxy server as the “default” SIP proxy server, as detailed in their briefing.

b. Discussion

Claim 16 adds to Claim 13 a “SIP proxy server” that is presumably similar to the “SIP proxy server” recited in Claim 9, discussed above. *Phillips*, 415 F.3d at 1314 (“Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.”) Defendants’ proposals of language regarding “default” SIP proxy server and “carrier-owned SIP network signaling endpoint” therefore lack support in the claim and are rejected as improperly importing limitations from a preferred embodiment. The Court construes “SIP proxy server for devices using the telephone line interface and for devices using the computer data interface” to mean “SIP proxy

server that can be used by a SIP user agent representing a telephone station and a SIP user agent representing a computer workstation to participate in SIP network signaling operations.”

V. CONCLUSION

The Court hereby ORDERS the disputed claim terms construed as set forth above.

IT IS SO ORDERED.

SIGNED this 13th day of July, 2009.

A handwritten signature in black ink, appearing to read "David Folsom", written over a horizontal line.

DAVID FOLSOM
UNITED STATES DISTRICT JUDGE