IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

CHRIMAR SYSTEMS, INC. d/b/a CMS TECHNOLOGIES AND CHRIMAR HOLDING COMPANY, LLC,	§	
vs.	§	**Civil No. 6:13-cv-880-JDL**
ALCATEL-LUCENT, INC. et al.,	§	
CHRIMAR SYSTEMS, INC. d/b/a CMS TECHNOLOGIES AND CHRIMAR HOLDING COMPANY, LLC,	§	
vs.	§	**Civil No. 6:13-cv-881-JDL**
AMX, LLC,	§	
CHRIMAR SYSTEMS, INC. d/b/a CMS TECHNOLOGIES AND CHRIMAR HOLDING COMPANY, LLC,	§	
vs.	§	**Civil No. 6:13-cv-883-JDL**
SAMSUNG ELECTRONICS CO., LTD., et al.	§	

MEMORANDUM OPINION AND ORDER

This claim construction opinion construes the disputed claim terms in U.S. Patent No. 8,115,012 ("the '012 Patent"). Plaintiffs ChriMar Systems, Inc. d/b/a CMS Technologies and Chrimar Holding Company LLC allege that Defendants[1] infringe the '012 Patent. Plaintiffs

[1]Defendants include Alcatel-Lucent USA, Inc., Alcatel-Lucent Holdings, Inc., AMX LLC, Samsung Telecommunications America, LLC, and Samsung Electronics Co., Ltd. Defendants Aastra Technologies, Ltd., Aastra USA Inc, and Grandstream Networks, Inc. have since settled. *Chrimar Systems, Inc. v. Aastra Technologies Limited*, No. 6:13-cv-879, Doc. No. 70; *Chrimar Systems, Inc. v. Grandstream Networks, Inc.*, No. 6:13-cv-882, Doc. No. 92.

presented their claim construction position (Doc. No. 83) ("PLS.' BR.").[2] Defendants filed a Response (Doc. No. 88) ("RESP.") and Plaintiff filed a Reply (Doc. No. 91) ("REPLY"). The parties additionally submitted a Joint Claim Construction Chart pursuant to P.R. 4-5(d). Doc. No. 93. On October 30, 2014, the Court held a claim construction hearing. Upon consideration of the parties' arguments and for the reasons stated herein, the Court adopts the constructions set forth below.

OVERVIEW OF THE PATENTS

Plaintiff alleges Defendants infringe independent claims 31 and 67 and dependent claims 35, 42, 43, 49, 50, 55, 66, 72, 73, 77, 88, 89, and 106 ("the asserted claims") of the '012 Patent. PL.'S BR. at 1. The '012 Patent is titled "System and Method for Adapting a Piece of Terminal Equipment," and relates to tracking of devices that are connected to a wired network. '012 Patent. More specifically, the '012 Patent describes permanently identifying an "asset," such as a computer, "by attaching an external or internal device to the asset and communicating with that device using existing network wiring or cabling." '012 Patent at 1:67–2:2. The '012 Patent refers to that device as the "remote module." *Id.* at 3:22–26. The asset can then be managed, tracked, or identified by using the remote module to communicate a unique identification number, port ID, or wall jack location to the network monitoring equipment, or "central module." *Id.* at 6:7–13 and 8:66–9:4. The '012 Patent further discloses that "asset identification" may be done in a way "that does not use existing network bandwidth." *Id.* at 3:10–12. These concepts are reflected in the patents' asserted claims, including independent claims 31 and 67 as set forth below:

> 31. An adapted piece of Ethernet data terminal equipment comprising:
> an Ethernet connector comprising a plurality of contacts;
> and

[2] All citations herein will be to the Docket in No. 6:13-cv-880 unless otherwise indicated.

at least one path coupled across selected contacts, the selected contacts comprising at least one of the plurality of contacts of the Ethernet connector and at least another one of the plurality of contacts of the Ethernet connector,

wherein distinguishing information about the piece of Ethernet data terminal equipment is associated to impedance within the at least one path.

67. A method for adapting a piece of terminal equipment, the piece of terminal equipment having an Ethernet connector, the method comprising:

coupling at least one path across specific contacts of the Ethernet connector, the at least one path permits use of the specific contacts for Ethernet communication, the Ethernet connector comprising the contact 1 through the contact 8, the specific contacts of the Ethernet connector comprising at least one of the contacts of the Ethernet connector and at least another one of the contacts of the Ethernet connector; and

arranging impedance within the at least one path to distinguish the piece of terminal equipment.

'012 Patent, claims 31 and 67.

There are six disputed terms or phrases in the asserted claims. One term has been construed by the Court following early claim construction briefing and oral argument on September 3, 2014. Doc. No. 92 ("EARLY CLAIM CONSTRUCTION OPINION"). In its Order, the Court denied Defendants' summary judgment motion and construed the "distinguishing" term as follows:

Term	**Construction**
"distinguishing information about the piece of Ethernet terminal equipment" (Claim 31)	"information to distinguish the piece of Ethernet data terminal equipment from at least one other piece of Ethernet data terminal equipment"
"to distinguish the piece of terminal equipment" (Claim 67)	"to distinguish the piece of terminal equipment having an Ethernet connector from at least one other piece of terminal equipment having an Ethernet connector"

EARLY CLAIM CONSTRUCTION OPINION at 15. Trial is scheduled for September 8, 2015.

CLAIM CONSTRUCTION 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) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent's intrinsic evidence to define the patented invention's scope. *Id.* at 1313-1314; *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312-13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003). Claim language guides the Court's construction of claim terms. *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims, asserted and unasserted, can provide additional instruction because "terms are normally used consistently throughout the patent." *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). "[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.'" *Id.* (quoting *Vitronics Corp.v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex. Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or

disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve 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, Inc.*, 299 F.3d at 1325. For example, "[a] claim interpretation that excludes a preferred embodiment from the scope of the claim 'is rarely, if ever, correct." *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of 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."). The well-established doctrine of prosecution disclaimer "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." *Omega Eng'g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during

prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002); *see also Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 994 (Fed. Cir. 2003) ("The disclaimer . . . must be effected with 'reasonable clarity and deliberateness.'") (citations omitted)). "Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover." *Spectrum Int'l v. Sterilite Corp.*, 164 F.3d 1372, 1378-79 (Fed. Cir. 1988) (quotation omitted). "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." *Omega Eng'g, Inc.*, 334 F.3d at 1324.

Although "less significant than the intrinsic record in determining the legally operative meaning of claim language," the Court may rely on extrinsic evidence to "shed useful light on the relevant art." *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful." *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

DISCUSSION

I. "distinguishing information about the piece of Ethernet terminal equipment" and "to distinguish the piece of terminal equipment"

As discussed above, the Court construed these terms in its Early Claim Construction Opinion. Doc. No. 92. Defendants' renewed summary judgment arguments (Doc. No. 87) will be addressed in a separate Opinion.

II. "impedance" (claims 31, 35, 50, 67, 73, 77, and 72)

Plaintiffs' Proposal	Defendants' Proposal
Plain and ordinary meaning. No construction necessary.	"the resistance to the flow of alternating current in a circuit" *Alternatively:* "the opposition to the flow of alternating current"

PLS.' BR. at 6; RESP. at 3.

A. The Parties' Contentions

Plaintiffs argue this term requires no construction because the intrinsic evidence allows the impedance to operate as opposition to the flow of current, whether that current is AC or DC. PLS.' BR. at 7. In support, Plaintiffs' and their expert, Les Baxter, proffer that impedance consists of resistance plus reactance that applies in both AC and DC circuits. Doc. No. 83-2, Ex. B ¶ 23, Decl. of Les Baxter ("Baxter Decl."). *Id.* When calculating impedance in DC circuits, the reactance is zero and therefore impedance equals the resistance alone. *Id.* Plaintiff further points to several portions of the '012 Patent specification that reference DC current as well as several extrinsic dictionary definitions and Alcatel-Lucent's own patent. *Id.* ¶ 24; PLS.' BR. at 9.

Defendants, on the other hand, argue that the intrinsic evidence points to use of an AC circuit through the disclosure of a transformer in the specification because "a transformer only permits AC signal to propagate." RESP. at 6-9. Defendants additionally point to the IEEE Dictionary as extrinsic evidence that impedance in the '012 Patent refers to an AC circuit. *Id.* at 5. During the October 30, 2014 hearing, Defendant proposed that the term "impedance" applies

only to current that has a frequency component, and suggested "the opposition to the flow of current, wherein the current has a frequency component" as a second alternative construction.

B. Claim Construction Analysis

Importantly, independent claim 67 refers to impedance without reference to AC or DC as recited below:

> 67. A method for adapting a piece of terminal equipment, the piece of terminal equipment having an Ethernet connector, the method comprising:
>
> coupling at least one path across specific contacts of the Ethernet connector, the at least one path permits use of the specific contacts for Ethernet communication, the Ethernet connector comprising the contact 1 through the contact 8, the specific contacts of the Ethernet connector comprising at least one of the contacts of the Ethernet connector and at least another one of the contacts of the Ethernet connector; and
>
> arranging impedance within the at least one path to distinguish the piece of terminal equipment.

'012 Patent, claim 67. Plaintiffs cite dependent claims 76, 82, 85, and 86 for the proposition that impedance opposes the flow of current, whether AC or DC. PLS.' BR. at 8. These dependent claims recite as follows:

> 76. The method according to claim 67 wherein the arranging impedance within the at least one path comprises arranging the impedance within the at least one path to *draw DC current*.
>
> 82. The method according to claim 67 wherein the arranging impedance within the at least one path comprises arranging impedance within the at least one path to have a first impedance for a first condition applied to the specific contacts followed by a second impedance for a second condition applied to the specific contacts.
>
> 85. The method according to claim 82 wherein the first and second conditions applied to the specific contacts are current conditions.
>
> 86. The method according to claim 85 wherein *the current conditions are DC current conditions.*

’012 Patent, claims 76, 82, 85 and 86. Because these dependent claims, particularly claim 86, specifically require DC while the independent claims do not, claim differentiation applies. “[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question [DC only] is not present in the independent claim.” *Phillips*, 415 F.3d at 1315. “It is axiomatic that a dependent claim cannot be broader than the claim from which it depends . . . A dependent claim narrows the claim from which it depends.” *Alcon Research, Ltd. v. Apotex Inc.*, 687 F.3d 1362, 1367 (Fed. Cir. 2012) (citing 35 U.S.C. § 112 ¶ 4); *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1334 (Fed. Cir. 2010) (“A person of ordinary skill would presume that a structure recited in a dependent claim will perform a function required of that structure in an independent claim.”) Here, if the impedance referred to in independent claim 67 applied only to AC, the DC limitation recited in these dependent claims would be inconsistent with the claim from which they depend. The reference to DC in the dependent claims therefore weighs against limiting “impedance” to AC in the independent claim because this would result in a dependent claim broadening the independent claim from which it depends.

Additionally, claim differentiation weighs against Defendants contention that disclosures relating to transformers restrict impedance to AC. Claims 53 and 97, which depend from independent claims 31 and 67, recite as follows:

> 53. The piece of Ethernet data terminal equipment according to claim 31 wherein the at least one path includes the center tap of at least *one isolation transformer*.
>
> 97. The method according to claim 67 wherein the at least one path includes the center tap of at least *one isolation transformer*.

‘012 Patent, claims 53 and 97. Here, because claims 53 and 97 depend from independent claims 31 and 67, these dependent claims cannot broaden the independent claims to require such a

transformer in every embodiment. *N. Am. Vaccine, Inc. v. Am. Cyanamid Co*., 7 F.3d 1571, 1577 (Fed. Cir. 1993) ("The dependent claim tail cannot wag the independent claim dog.") In fact, one embodiment replaces the isolation transformer with an interface amplifier. '012 Patent at 10:33-35 ("The fourth embodiment differs from the earlier described embodiments by employing an interface amplifier for the signal receiver 6*c* in place of an isolation transformer…"). Thus, Defendants' arguments regarding the use of transformers equating to an AC requirement is unpersuasive.

Turning to the specification, the term "impedance" appears in the '012 Patent as follows:

> Although the encoded signal in the present embodiment transmits the encoded signal from the remote module 16a, it is within the scope of the invention to source current from the central module and alter the flow of current from within the remote module 16a by changing the *impedance* of a circuit connected across the data communication link 2A. Examples of such circuits include an RC network connected directly to the data link 2A and reflecting an *impedance* change across an isolation transformer.

'012 Patent at 8:49-57.

> The current splits between the windings with the reflected primary *impedance* controlling the magnitude of the current that flows in each winding. The primary *impedance* is controlled by processor 122, the exclusive OR gates 120 and 121, and the two 10 k resistors 126 and 127.

'012 Patent at 9:65-10:3.

> The signal receiver 230 provides a balanced *impedance* on the serial bus for receiving the serial stream from the sender tag 202.

'012 Patent at 14:62-64 (emphasis added).

None of the above references to impedance mention AC or DC. Rather than specifying AC or DC, they all refer to "current" generically. Thus, one of skill in the art would not limit impedance to AC as Defendants contend.

Limiting impedance to AC also lacks support in the extrinsic evidence submitted by the parties. While Defendants cite *The Authoritative Dictionary of IEEE Standards Terms* 535 (7th ed. 2000) defining "impedance" in the context of "broadband local area networks" as meaning "[a] measure of the complex resistive and reactive attributes of a component in an alternating-current circuit" (RESP. at 5), Plaintiff's expert defines impedance with a formula where impedance consists of resistance plus reactance, or Z=R+jX. PLS.' BR. at 7 (citing Baxter Decl. ¶ 23). In DC circuits, the reactance is zero and therefore impedance equals the resistance alone. *Id.* Plaintiffs additionally rely on the *Oxford Concise Scientific Dictionary* to define impedance as "[t]he quantity that measures the opposition of a circuit to the passage of a current"[3] and cite an Alcatel-Lucent patent for the proposition that "[w]hen DC power systems are first activated, high levels of transient current may be generated as a result of capacitor impedance." PLS.' BR. at 9 (citing U.S. Patent No. 7,821,753 at 1:53-55, Ex. E). Thus, impedance fits within the DC context in the extrinsic evidence since reactance can be zero.

"Claim terms are generally given their plain and ordinary meanings to one of skill in the art when read in the context of the specification and prosecution history." *Hill-Rom Servs., Inc. v. Stryker Corp*., 755 F.3d 1367, 1371 (Fed. Cir. 2014) (citing *Phillips*, 415 F.3d at 1313). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution." *Id.* (citing *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)).

There is no such disclaimer or lexicography here. Nothing in the claims, specification or prosecution history discloses that impedance is limited to AC. Plaintiff proposes that the ordinary meaning of impedance "allows the impedance to be for opposition to the flow of

[3] PLS.' BR. at 9 (citing *Oxford Concise Scientific Dictionary* 362-63 (3d ed. 1996), Ex. F).

current, whether AC or DC current, in a path." PLS.' BR. at 7. Defendants propose impedance be construed as "the resistance to the flow of alternating current in a circuit" or alternatively, "the opposition to the flow of alternating current." RESP. at 3. Hence the parties essentially agree that impedance is opposition to the flow of current, but disagree whether that current is limited to AC. As discussed above, nothing in the intrinsic or extrinsic evidence shows that impedance in the '012 Patent is limited to AC. Therefore, the Court rejects Defendants' proposal and construes **"impedance"** to mean **"opposition to the flow of current."**

III. "terminal equipment" and "Ethernet data terminal equipment"

"terminal equipment"	
Plaintiffs' Proposal	**Defendants' Proposal**
Plain and ordinary meaning. No construction necessary.	"device at which data transmission originates or terminates"
"Ethernet data terminal equipment"	
Plaintiffs' Proposal	**Defendants' Proposal**
Plain and ordinary meaning. No construction necessary. *Alternatively:* "Ethernet terminal equipment that is capable of transmitting or receiving data"	"device at which data transmission originates or terminates and that is capable of Ethernet communication"

PLS.' BR. at 13; RESP. at 17; REPLY at 7. The "terminal equipment" term appears in claims 67, 72, and 106 and "Ethernet data terminal equipment" appears in claims 31, 35, 42, 43, 49, 50, and 55. *Id.*

Plaintiffs argue that "[t]hese terms mean just what they say, are readily comprehensible, and do not require construction." PLS.' BR. at 14. Defendants submit technical dictionary definitions of "data terminal equipment" as meaning: "Device at which data transmission originates or terminates. May be a keyboard/display terminal, a printer, a computer, a communication controller, or any similar device." RESP., Ex. 2, *McGraw-Hill Data*

Communications Dictionary 24 (1993). Additionally, Defendants reference "[t]he equipment comprising the data source, the data sink, or both." *Id.*, Ex. 3, *IEEE Standard Dictionary of Electrical and Electronics Terms* 226 (3rd. ed. 1984) (defining "data source" and "data sink"). Finally, Defendants refer to "[a] circuit, such as a terminal, that acts as a data source, a data sink, or both." *Id.*, Ex. 4, *McGraw-Hill Electronics Dictionary* 110 (6th ed. 1997) (defining "data source").

The Court finds Defendants have adequately demonstrated that the constituent term "terminal" distinguishes the disputed terms from intermediate network elements. Furthermore, Plaintiffs essentially agree that "terminal equipment" is capable of being the beginning or end of data transmission over a network. REPLY at 7. Therefore, the Court construes these terms as follows:

Term	Construction
"terminal equipment" (Claims 67, 72 & 106)	**"device at which data transmission can originate or terminate"**
"Ethernet data terminal equipment" (Claims 31, 35, 42, 43, 49, 50 & 55)	**"device at which data transmission can originate or terminate and that is capable of Ethernet communication"**

IV. "a method for adapting a piece of terminal equipment" and "an adapted piece of Ethernet data terminal equipment"

Plaintiffs' Proposal	Defendants' Proposal
These preambles are *not* limiting and have their plain and ordinary meaning.	These preambles *are* limiting and have their plain and ordinary meaning. Defendants propose that "terminal equipment" and "Ethernet data terminal equipment," as used in these phrases have the same meanings as in their individually proposed constructions.

PLS.' BR. at 17; RESP. at 21.

A. The Parties' Contentions

Plaintiffs argue that the preambles are not limiting because "if the preambles were deleted, the body of claim 31 would still describe an adapted piece of Ethernet data terminal

equipment, and the body of claim 67 would still recite steps for a method for adapting a piece of terminal equipment." PLS.' BR. at 18.

Defendants respond that "as set forth throughout the patent specification, the inventors address the Total Cost of Ownership (TCO) problem by taking existing network assets that are otherwise indistinguishable and adapting those assets to make them distinguishable from each other." RESP. at 21 (citing '012 Patent at 4:41-47). Defendants conclude that Plaintiffs' position is "an improper attempt to read out the 'adapting' requirement and would undermine the entire purpose of the invention and shift away from the particular problem the inventors were seeking to address." *Id.* at 22 (citing '012 Patent at 1:23-3:14). Further, Defendants argue "the '012 Patent is the only one of its family to focus the issued claims on 'adapting.'" *Id.* at 23.

B. Claim Construction Analysis

Generally, "a preamble limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett–Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999). "[D]ependence on a particular disputed preamble phrase for antecedent basis may limit claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention. Likewise, when the preamble is essential to understand limitations or terms in the claim body, the preamble limits claim scope." *Id.* (citations omitted). The issue of preamble language acting as a limitation is determined on a case-by-case basis in light of "the overall form of the claim, and the invention as described in the specification and illuminated in the prosecution history." *Allen Eng'g Corp. v. Bartell Indus. Inc.*, 299 F.3d 1336 (Fed. Cir. 2002).

Here, both the Abstract and the Summary of the Invention use the word "adapted" as follows:

> This invention is particularly *adapted* to be used with an existing Ethernet communications link or equivalents thereof.

'012 Patent at 3:35-37 (emphasis added). The specification further discloses:

> The communication system 15 and 16 described herein is particularly *adapted* to be easily implemented in conjunction with an existing computer network 17 while realizing minimal interference to the computer network.

Id. at 4:56-60 (emphasis added).

As enumerated above, claims 31 and 67 recite:

> 31. An *adapted piece of Ethernet data terminal equipment* comprising:
>
> an Ethernet connector comprising a plurality of contacts; and
>
> at least one path coupled across selected contacts, the selected contacts comprising at least one of the plurality of contacts of the Ethernet connector and at least another one of the plurality of contacts of the Ethernet connector,
>
> wherein distinguishing information about *the piece of Ethernet data terminal equipment* is associated to impedance within the at least one path.

'012 Patent, claim 31 (emphasis added).

> 67. A method for *adapting a piece of terminal equipment*, the piece of terminal equipment having an Ethernet connector, the method comprising:
>
> coupling at least one path across specific contacts of the Ethernet connector, the at least one path permits use of the specific contacts for Ethernet communication, the Ethernet connector comprising the contact 1 through the contact 8, the specific contacts of the Ethernet connector comprising at least one of the contacts of the Ethernet connector and at least another one of the contacts of the Ethernet connector; and
>
> arranging impedance within the at least one path to distinguish *the piece of terminal equipment*.

'012 Patent, claim 67 (emphasis added). The claim body in both claims refers back to the preamble which indicates a limitation based on an antecedent basis. Preamble language that describes an antecedent in greater detail can be limiting. *Proveris Scientific Corp. v.*

Innovasystems, Inc., 739 F.3d 1367, 1373 (Fed. Cir. 2014) ("The phrase 'the image data' clearly derives antecedent basis from the 'image data' that is *defined in greater detail in the preamble* as being 'representative of at least one sequential set of images of a spray plume.'") (emphasis added). Here, in claim 31, "the piece of Ethernet data terminal equipment" refers back to the "adapted piece of Ethernet data terminal equipment" in the preamble while "the piece of terminal equipment" in claim 67 refers back to the method for "adapting a piece of terminal equipment." *See id.; see also Eaton Corp. v. Rockwell Int'l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) ("When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention."); *Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp.*, 55 F.3d 615, 621 (Fed. Cir. 1995) ("[t]hese two steps of the claimed method, by referring to 'said packet,' expressly incorporate by reference the preamble phrase 'said packet including a source address and a destination address.'")

As an additional example of reliance on the preambles for antecedent basis, Defendants cite claim 98 of the '012 Patent, which recites:

> 98. The method according to claim 67 further comprising physically connecting the *adapted* piece of terminal equipment to a network.

'012 Patent, claim 98 (emphasis added).

It appears that "adapting a piece of terminal equipment" in the preamble of claim 67 provides antecedent basis for "the adapted piece of terminal equipment" in claim 98. *Cf. Ex Parte Porter*, 25 U.S.P.Q. 2d 1144, 1145 (B.P.A.I. 1992) ("The term 'the controlled fluid' . . . finds reasonable antecedent basis in the previously recited 'controlled stream of fluid' . . . ."). More importantly, a read of the '012 Patent reveals that every claim in the '012 Patent either has "adapting" or "adapted" in the preamble, or depends from such a claim. *See generally* '012

Patent claims. Further, as noted by Defendants, the '012 Patent places emphasis on "adapting" in the issued claims as compared to the patents within the same family. The "adapting" requirement in the claims of the '012 Patent is essential to address the problem confronted by the inventors taking existing networks and adapting them to make equipment distinguishable. Thus, the word "adapting" must have some meaning.

Also noteworthy, Plaintiffs agreed during the October 30, 2014 Claim Construction hearing that the preambles be construed as limiting and given their plain and ordinary meaning for the purpose of compromise. While the parties dispute the meaning of the term "adapt," it appears indisputable that the preambles are limiting. The Court therefore finds that the preambles of claims 31 and 67 are **limiting**.

CONCLUSION

For the foregoing reasons, the Court adopts the constructions set forth above.

So ORDERED and SIGNED this 7th day of January, 2015.

JOHN D. LOVE
UNITED STATES MAGISTRATE JUDGE