

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

**EON CORP. IP HOLDINGS, LLC,
Plaintiff,**

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v.

Civil Action No. 6:11-cv-00317-LED-JDL

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JURY TRIAL REQUESTED

**LANDIS+GYR INC., et al.,
Defendants.**

§
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v.

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§

Civil Action No. 6:11-cv-0015-LED-JDL

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JURY TRIAL REQUESTED

**SKYGUARD, LLC, et al.,
Defendants.**

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MEMORANDUM OPINION AND ORDER

This claim construction opinion construes the disputed terms in U.S. Patent Nos. 5,388,101 (“the ‘101 Patent”) and 5,481,546 (“the ‘546 Patent”). For the reasons stated herein, the Court adopts the constructions set forth below.

BACKGROUND

Plaintiff Eon Corp. IP Holdings, LLC (“Eon”) alleges Defendants¹ infringe the ‘101 and ‘546 Patents (“patents-in-suit”). The parties have presented extensive claim construction briefing (Doc. Nos. 187, 201, 206, 207 in the 6:11cv15 case, and 179, 190, 207, 216, 217, 218, and 219 in the 6:11cv317 case).

¹ Defendants in Civil Action No. 6:11cv317 are Landis+Gyr Inc. (“Landis+Gyr”), Aclara Powerline Systems Inc. and Aclara RF Systems, Inc. (“Aclara”), Elster Solutions LLC, EngeryICT, Inc., and Elster AMCO Water LLC (“Elster”), Silver Spring Networks, Inc. (“SSN”), Itron, Inc. (“Itron”), and Trilliant Networks, Inc. (“Trilliant”). Defendants in Civil Action No. 6:11cv15 Skyguard, LLC (“Skyguard”); Cantaloupe Systems, Inc. (“Cantaloupe”); Space Data Corporation (“Space Data”); MedApps, Inc. (“MedApps”); MEI, Inc. (“MEI”); and Novatel Wireless, Inc. (“Novatel”) (collectively, “Defendants”). Defendants Skyguard LLC, MedApps, Inc., MEI, Inc., and Cantaloupe Systems Inc. have since been dismissed from the 6:11cv15 (Doc. Nos. 64, 92, 174, and 192).

On July 25, 2012, Eon filed its opening claim construction brief in this case (Doc. No. 179) (“PL.’S BR.”). Defendants collectively filed a single response (Doc. No. 190)² (“DEF. BR.”), and Eon filed a Reply (Doc. No. 207) (“REPLY”). On September 6, 2012, the Court held a claim construction hearing. At the hearing, the Court ordered supplemental briefing by Eon on the terms “point-to-point communication,” “limited to” and “digital transducers.” (Doc. Nos. 216, 217). Defendants also filed a supplemental brief on the terms. (Doc. Nos. 218, 219).

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 1313–14; *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

² Remaining Defendants Novatel Wireless, Inc. and Enfora, Inc. filed a Notice joining the Landis+Gyr responsive claim construction brief (Doc. No. 200) (6:11cv15).

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. Ficoso 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 that 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*, 323 F.3d at 994 (“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

A. Overviews of the Patents-in-Suit

As the ‘546 Patent is a continuation of the ‘101 Patent, the patents are essentially identical except for the claims themselves. The patents “relate[] to an interactive two-way data service network for conveying synchronously timed digital messages point to point through the network.” ‘101 Patent at 1:8–10. The invention was directed at facilitating long distance communication with subscriber units of maximum effective radiated power under twenty Watts on the Federal Communication Commission (“FCC”) authorized 218-219 MHz band. *Id.* at 1:28–35. The network consists of “portable subscriber units of milliWatt transmitting power capacity,” *id.* at 3:35–36, base stations capable of transmitting data to the subscriber units, *id.* at 3:62–65, and “receive only stations” that relay communications from the subscriber units to the base stations. *Id.* at 3:65–4:2. Figure 2 illustrates an exemplary base station site:

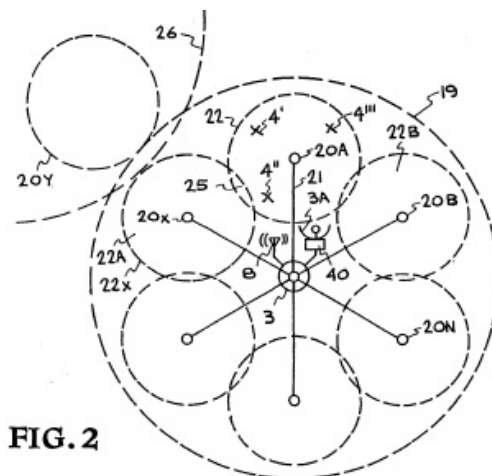


FIG. 2

The base station 3 is located at the center of a local area territory, delineated by ring 19. *Id.* at 5:40–47. Subscriber units x 4’, 4”, etc. are distributed throughout the local area territory. *Id.* at 5:54–6:4. As the subscriber units transmit at a lower power than the base station, remote receive-only relay stations 20A-20N are positioned at strategic locations within the territory to relay communications from the subscriber units to the base station. *Id.*

Eon accuses Defendants of infringing claims 1, 9, 13–15, 19, and 20 of the ‘101 Patent and claims 1–3, 5, 7–10, 12–14 of the ‘546 Patent. DEF. BR. at 1.

B. Disputed Terms

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
1. “receive only,” “receiving only,” “receive only stations”		
101:1 101:13 101:14 101:20 -18 546:14	<p>EON proposes the Court’s prior construction for “receive only stations:” “a receiver for receiving transmissions.”</p> <p>EON proposes the Court’s prior construction for “receive only digital receivers:” “a receiver for receiving and relaying digital communications.”</p> <p>To the extent necessary, EON proposes the Court construe similar terms consistent with the Court’s prior related constructions, but otherwise proposes the terms should have their plain and ordinary meanings.</p>	<p>“a device whose only role with respect to data messages communicated between a base station and subscriber units is to receive them from the subscriber units and to pass them along to the base station”</p> <p>Defendant Aclara’s proposed construction: “a device, which is a separate component and geographically distinct from the base station, whose only role with respect to data messages communicated between a base station and subscriber units is to receive them from the subscriber units and to pass them”</p>

Eon cites the Court's prior construction of "receive only stations" and "receive only digital receivers" in the *Verizon* case (*Eon Corp. IP Holdings, LLC v. Verizon Clinton Center Drive Corp. et al.*, Case No. 6:08-cv-385 (E.D. Tex.)) and the *Sensus* case (*Eon Corp. IP Holdings, LLC v. Sensus USA*, Case No. 6:09-cv-116 (E.D. Tex.)) to support its proposed construction. PL.'S BR. at 4. Defendants argue that Eon's construction, "a receiver for receiving transmissions" effectively reads "only" out of the claims. DEF. BR. at 4. Defendants argue that the Court's construction in *Sensus* is too broad because it improperly encompasses a receive only device that would transmit data messages from the base station to the subscriber unit. *Id.* Specifically, Defendants argue that such a construction goes against the specification of the '101 and '546 Patents, which states that receivers only receive from subscriber units and transmit to the base station. *Id.* Accordingly, Defendants contend the Court construed a two-way system instead of a one-directional system as disclosed. *Id.* Defendant Aclara further argues that a "geographically distinct" limitation should be added in the Court's construction because if the receive only components were not geographically distinct from the base station, their only purpose of receiving low power signals from the subscriber units and passing on to the base station cell would be defeated. *Id.* at 5.

Not surprisingly, whether the remote receivers must only relay transmissions from the subscriber units was also the heart of the parties' dispute in *Sensus*. SENSUS ORDER at 40 (Doc. No. 205). The Court adopts and clarifies its rationale in *Sensus* herein. In *Sensus*, the Court stated:

In the context of the entire specification, it is clear "receive only" refers to the communication of messages to and from the base stations cells and the subscriber units. That is, the subscriber unit can only receive digital data message directly from the base station cell and not from the reception units. The reception unit's role with respect to those messages is simply to receive them from the low powered subscriber units and to pass them along to the base station cell. This does

not, however, forbid routine handshaking, error checking, and other control signals from being communicated between the reception units and the subscriber units.

Id. at 41.

The Court's opinion in *Sensus* makes it clear that the Court's construction does not expand the claim to something it does not cover. In construing the terms, the Court relied on the role of the reception unit in the patent to receive data messages from the low powered subscriber units and to pass them along to the base station cell, while also accounting for "routine handshaking, error checking, and other control signals" that may be transmitted in the reverse direction. Nothing in the Court's construction then or now is to suggest that a "receive-only station" would transmit data messages from the base station to the subscriber unit.

Aclara's proposed construction, which adds a geographic limitation to the location of the receive-only stations, is not supported by the specification of the '101 Patent. The specification teaches a "plurality of receive only stations distributed throughout the region." '101 Patent 3: 65–66. No context is given as to what is meant by "region," and when read in light of the specification, the only geographic limitation is the "base station designated area." '101 Patent 3: 64–65; 4: 2. Further, nothing in the claims themselves limit the "receive-only stations" to being geographically distinct from the base station. The only basis Alcara has to support its argument is the role of the receive only stations to allow communication "over a significantly reduced transmission path distance within the subdivided response area." DEF. BR. at 6. Without more specific language or a greater description regarding a geographically distinct requirement in the specification or the claims, adding the limitation to the Court's construction is unnecessary and

unfounded. Therefore, the Court clarifies and adopts its prior construction, and construes “receive only stations” as “a receiver for receiving transmissions.”³

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
2. “base station broadcast signal”		
101:1 546:1	EON proposes the Court’s prior construction: “a wireless signal transmitted to a plurality of subscriber units and/or receivers.”	“a wireless signal transmitted from a base station directly to all subscriber units and/or receivers”

Eon again proposes the Court’s prior construction from *Sensus* for “base station broadcast signal.” PL.’s BR. at 18. Defendants argue for the addition of the words “directly” and “all” to the construction to clarify and reflect the disclosed embodiment. DEF. BR. at 13–14. Eon counters that if the Court were to limit the claim to “all” it would serve “no purpose other than to advance Defendants’ non-infringement agenda” by avoiding infringement if one subscriber unit does not receive the broadcast signal. PL.’s BR. at 18. Eon also argues that the addition of directly would inappropriately limit the claims to video or television transmission applications. PL.’s BR. at 18.

The Court turns first to Defendants’ suggestion to add the term “all” to clarify the Court’s *Sensus* opinion. In *Sensus*, all three parties proposed constructions arguing for transmission “to a plurality of subscriber units.” SENSUS ORDER at 27. However, in *Sensus*, the Court made clear that the patents-in-suit required transmission to all.

Finally, a broadcast signal may be intended for a specific subscriber unit, but it must be broadcast to all units. This is inherent in the term, as the claim language specifically describes the signal as a broadcast signal, as opposed to a multicast or unicast signal. Any given message transmitted by the base station to a subscriber unit is sent to all units.

Id. at 30.

³ The Court construes the related terms in the same manner.

The Court’s *Sensus* opinion makes clear that the broadcast signal must be to all units, and its reasoning for that conclusion is evident. To clarify, the Court’s opinion states that the signal must be transmitted to all, not necessarily received by all. As the patents-in-suit set out, “base station broadcast signal” refers to the transmitted signal; thus, it is irrelevant whether the signal is actually received by all units. ‘101 Patent 11:49–55, ‘546 Patent 11:20–26. In this regard, the term “all” in the construction better encompasses the claims than a “plurality,” which designates only two or more. Therefore, the Court finds the limitation “all” to be appropriate and advantageous in clarifying its *Sensus* opinion.

Turning to “directly,” the parties dispute whether the limitation, if added, would foreclose transmission through an intermediary. While the Court does not believe the addition of “directly” to the construction would limit the claims to video or television transmission applications, it does not find a sufficient reason to add the term to the Court’s prior construction given the absence of any supporting evidence in the specification. Defendants point to Figures 1, 6A, and 7A and a characterization by the inventor in the related ‘491 Patent to evidence direct transmission, but offer no further evidence of this limitation in the ‘101 or ‘546 Patents. While the Figures show directional arrows with no intermediaries to support an inference of direct transmission, the Court has no sound basis to hold that the transmission must be “directly” as a matter of law without any additional supporting evidence in the patents-in-suit.

For the reasons stated herein, the Court construes “base station broadcast signal” as “a wireless signal transmitted to all subscriber units and/or receivers.”

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
3. “synchronously related,”	“multiplexed synchronously related digital data messages”	
“synchronously related to [a/the/said] [base station broadcast signal/at least one data message that is transmitted]”		
101:1 546:1	EON proposes these terms be construed consistent with the	“synchronously related” means “related by a precise time

Claim Language	Plaintiff's Proposal	Defendants' Proposal
546:14	<p>Court's prior constructions.</p> <p>EON proposes the Court's prior construction for "synchronously related:" "related in time and/or frequency."</p> <p>EON proposes the Court's prior construction for "multiplexed:" "multiplexed" means "combined messages transmitted over a single channel."</p>	<p>function"</p> <p>"Multiplexed synchronously related digital data messages" means "multiple digital data messages interwoven into a single signal according to a precise time function"</p> <p>"synchronously related to [a/the/said] [base station broadcast signal/at least one data message that is transmitted]" means "related by a precise time function, namely transmitted in a response interval of the [broadcast signal/at least one data message that is transmitted]"</p>

Based on the parties' briefing (Doc. Nos. 179, 190) and arguments at the September 6, 2012 *Markman* hearing, the parties' dispute surrounds the meaning of "synchronously related." The parties include the term "multiplexed," and Eon proposes it to mean "combined messages over a single channel," PL.'s BR. at 15, but Defendants only define "multiplexed synchronously related digital data messages" as "multiple digital data messages interwoven into a single signal according to a precise time function" and do not brief directly on the meaning of "multiplexed." DEF. BR. at 10–13. To the extent there is a dispute, the Court construes "multiplexed" by its plain and ordinary meaning to be "combined messages transmitted over a single channel," and adopts the reasoning set forth in *Sensus*. SENSUS ORDER at 47.

Regarding "synchronously related," Eon argues that the Court should adopt its prior construction in *Sensus*, "related in time and/or frequency" for the reasons set forth therein. PL.'s BR. at 11. Defendants argue that Eon's proposed construction is too broad and "synchronously related" must be "related by a precise time function." DEF. BR. at 10. Defendants point to

multiple portions of the specification where “synchronous” and related words are tied directly to “time” “timing” and “timed.” ‘101 Patent: 1:8–10, 2:36–39, 39–43, 3:6–11, 7:43–45, 9:44–49, 51–66.

Turning to Defendants’ argument, the Court rejects the proposed addition of a “precise time function.” First, although the portions of the specification Defendants offer do support the conclusion that the synchronized signals are timed, nothing in the specification suggests the Court limit the term to a *precise* time function. Second, the claims of the ‘101 and ‘546 Patents provide some guided insight as to the relationship between “synchronously related” and a timing function. Claim 1 of both the ‘101 and ‘546 Patents refers to “synchronously related” in one part of the claim and “synchronously related to said base station broadcast signal and *timed*” in another. ‘101 Patent 11:36, 53–54; ‘546 Patent 11: 3-4, 24-25. This disparity creates a presumption that the claim terms “synchronously related” and “synchronously related ... and timed” have different meanings. *Exchange v. Int’l Sec. Exchange, LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012) (stating claim construction principles create a presumption that different claim terms have different meanings). If “synchronously related” meant only “related by a precise time function,” as Defendants contend, it would render the claim language redundant where it says “synchronously related ... and timed.” In sum, while Defendants’ proposal encompasses one of the disclosed embodiments, it is unnecessarily limiting and creates a redundancy in claim language.

Therefore, the Court construes “synchronously related” as “related in time and/or frequency.”

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
4. “subscriber units limited to digital processing facilities comprising digital transducers”		
101:19	No construction is	“having only digital processing facilities,

	necessary.	<p>which include digital transducers, but do not also contain non-digital transducers and other non-digital circuitry”</p> <p>A “digital transducer” is “any transducer that presents information as discrete samples and that does not introduce a quantization error when the reading is represented in a digital form”</p>
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The disputed terms “limited to digital processing facilities” and “digital transducers” appear only in conjunction in Claim 19 of the ‘101 Patent. ‘101 Patent 14: 34–35. Eon originally proposed “no construction necessary.” PL.’S BR. at 19. However, at the September 6, 2012 *Markman* hearing, the Court was of the opinion that a construction needed to be proposed and therefore ordered supplemental briefing. Eon submitted a supplemental construction (Doc. No. 217) (“PL.’S SUPP. BR.”) and Defendants also filed a supplemental claim construction brief (Doc. No. 219) (“DEF. SUPP. BR.”), both addressing “limited to” and “digital transducers.”

In its supplemental brief, Eon argues that “limited to” defines a set of subscriber units as digital processing facilities comprising a digital transducer and receiver. PL.’S SUPP. BR. at 1. Both parties agree that the “limited to” modifies and restricts the subscriber units of Claim 19. *Id.*, DEF. BR. at 15. The parties’ dispute is really whether the subscriber units limited to digital processing facilities can contain any analog (non-digital) processing circuitry. Defendants argue that the plain language of “limited to” means only digital processing facilities and therefore digital circuitry. DEF. BR. at 16. Eon argues that the subscriber units of Claim 19 may interact or associate with elements that are non-digital, *i.e.* analog sensors and transducers. PL. SUPP. BR. at 2.

Defendants miss the mark by arguing that “limited to” means only digital circuitry. Clearly, the “limited to” language of Claim 19 restricts the encompassed subscriber units to

“digital processing facilities,” but it does not follow that those facilities must have only digital processing circuitry without other evidence leading to such a conclusion. Defendants offer no support for their leap to this conclusion other than superimposing this ordinary term, which modifies the preceding term, onto a term of art following it. “Limited to” has a plain and ordinary meaning that can be easily understood as a limitation placed upon the subscriber units of Claim 19, precisely why neither party disputes its modification and restriction of the subscriber units in Claim 19. Although “limited to” restricts and modifies the subscriber units, it does nothing to restrict what is meant in the art by “digital processing facilities comprising digital transducers.” Therefore, the Court finds no construction necessary for “limited to” and construes it with respect to its plain and ordinary meaning.

The issue of digital versus analog arises in the parties’ proposed definitions of “digital transducers.” In its supplemental claim construction brief, Eon defines “digital transducer” as “a device that (1) produces digital data in response to receiving energy in some form; or (2) produces an output responsive to received digital data.” PL. SUPP. BR. at 1. Particularly, Eon argues that a digital transducer may receive non-digital input. *Id.* at 3. Eon submits that the specification supports this contention where it describes “transducer 53” as “typically a manual keyboard or a digital sensing instrument.” ‘101 Patent 10:18–20. Further, Eon cites extrinsic evidence defining “digital transducer” as “[a] transducer that measures physical quantities and transmits the information as coded digital signals rather than as continuously varying currents or voltages.” MCGRAW HILL ELECTRONICS DICTIONARY 126 (6th ed. 1994). Defendants cite to the paragraph titled “Transducers” of the book CONTROL SENSORS AND ACTUATORS, where it states “[a]ny transducer that presents information as discrete samples and that does not introduce a

quantization error when the reading is represented in the digital form may be classified as a digital transducer.”⁴

Eon’s support in the specification, “transducer 53, typically a manual keyboard or a digital sensing instrument” sets up a conflicting view of what is disclosed. A “manual keyboard” suggests a broader interpretation is required to define the actual disclosed invention, while “a digital sensing instrument” seems to preclude a digital instrument that senses analog data that is then converted into digital data. Similarly, Defendants’ own extrinsic source contradicts Defendants’ argument that digital processing facilities must contain only digital circuitry by expressly stating the possibility of analog output processing in a digital transducer:

Nevertheless, the sensor stage of digital measuring devices is usually quite similar to that of their analog counterparts. There are digital measuring devices that incorporate microprocessors to perform numerical manipulations and conditioning locally and provide output signals in either digital or analog form.

Id.

Although conflicting, both parties’ supporting evidence suggests there is nothing in the ‘101 Patent to exclude the possibility of an analog output in Claim 19. The “limited to” language on the “digital processing facilities,” of which the “digital transducer” is a part, is not enough to limit the claims to only “non-digital circuitry” when the specification and extrinsic evidence suggest otherwise. Further, the interplay between the “digital processing facilities” and the “digital transducer” is evidenced by “comprising” joining the claim terms. “‘Comprising’ is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.” *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997). Thus, the “digital processing facilities” must contain “digital transducers,” but may also contain additional elements within the scope of

⁴ DE SILVA, CLARENCE W., CONTROL SENSORS AND ACTUATORS 218 (David Ershun ed. 1989).

the claim. Since at least the “digital transducer” part of the “digital processing facility” can produce analog output, limiting the “digital processing facility” to only digital circuitry is improper.

Therefore, the Court construes a “digital transducer” as one that measures physical quantities and transmits the information as coded digital signals rather than as continuously varying current or voltages, *i.e.*, analog signals. A “digital transducer,” as used in the claims does not preclude a transducer that measures quantities in analog format, and then converts those analog signals to digital signals for transmission.

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
5. “predetermined base station geographic area” and “predetermined geographic area”		
101:1 546:1 101:16-18	No construction is necessary.	“An area with geographic boundaries that are determined prior to the deployment of the base station. The area does not substantially overlap with adjacent geographic areas. The area is designed to have within it a single base station and multiple subscriber units in which the base station only communicates with subscriber units within the area”

Eon contends that the terms need no construction and should be construed pursuant to their plain and ordinary meanings. PL.’S BR. at 25. In support of its construction, Defendants argue that a “predetermined base station geographic area” must have boundaries that are determined before deployment of the base station. DEF. BR. at 27. Defendants point to Figure 2 to show the boundaries of this predetermined area and demonstrate that there is no overlap between adjacent cells. *Id.* at 26. Eon argues that the boundaries of the base station geographic area need not be determined prior to deployment because the base station is not tied to a stationary cell tower or other base station repeater cell equipment, but rather is a “geographic

area where deployment of the communication service is desired.” REPLY at 8 (Doc. No. 207). Eon cites portions of the specification describing the Federal Communications Commission (“FCC”) licensing scheme for establishing the local area cell site to support its contention. ‘101 Patent 1:28–35, 45–47. Eon also argues that if the term were construed as Defendants suggest, networks could never evolve or improve. REPLY at 8.

Nothing in the intrinsic record suggests that a permanent boundary for the base station geographic area be determined prior to deployment of the base station. Defendants mainly rely on the use of the word “predetermined” to come to the conclusion that the base station geographic area must be determined prior to deployment. As Eon points out, the “predetermined base station geographic area” cannot be permanently defined prior to deployment; in most instances, depending on the topography and changes in the environment of the area, adjustments must be made to determine whether the base station will be able to reliably communicate with the subscriber units. *Id.* at 9, *see also* FN 30, *In the Matter of Amendment of Parts 0, 1, 2, and 95 of the Commission’s Rules to Provide for Interactive Video Data Services*, Notice of Proposed Rule Making, (Doc. No. 91-2) (The FCC stated that: “[e]ach applicant must submit as part of the application a detailed plan indicating how the frequency segment requested will be utilized including the number and location of CTUs and how the proposed system will provide service to at least 50 percent of the area within the protected service area,” suggesting modification for providing reliable service.)

The Court finds the terms do not require construction because their meanings are clear in the context of the claims and will be readily understandable to the jury. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). Although the Court does

not construe these terms, the parties may not interpret them in a manner inconsistent with this opinion.

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
6. “cell site divided into a plurality of subdivided zones”		
546:14	No construction is necessary.	“a cell site subdivided into a plurality of fixed, geographically bound areas, wherein subscriber units in one such area do not communicate with receive only digital receivers contained in any other such fixed, geographically bound area.”

Eon contends that “cell site divided into a plurality of subdivided zones” needs no construction and should be construed pursuant to its plain and ordinary meaning. PL.’s BR. at 27. Defendants wish to limit the term to “fixed geographically bound areas” and prohibit subscriber unit communication with receive only digital receivers between the fixed areas. DEF. BR. at 29.

Regarding the “fixed” limitation, Defendants claim the specification supports the limitation where it states “fixed-location relay stations 20A-20N are positioned at strategic locations within the cell area.” ‘546 Patent 5:43–45. However, that description refers directly to the remote relay stations. It does not follow, nor is it supported by the intrinsic record, that the subdivided zones must be “fixed.” Therefore, the Court finds such a limitation improper.

Turning to Defendants’ proposed limitation that the subscriber units “do not communicate with receive only digital receivers in any other such fixed, geographically bound area,” the parties dispute whether a subscriber unit can communicate with more than one receiver during a “hand off.”⁵ Defendants point to Figure 2 to show the fringe areas where the hand off occurs, but point to no evidence to support their contention that at all times the subscriber unit

⁵ A hand off occurs when a subscriber unit moves from one stationary local site to another. ‘546 Patent: 8:38–40.

only communicates with a receiver in any other zone. DEF. BR. at 30. Eon points to several places in the ‘101 Patent that suggest transmissions are sent to multiple receivers. ‘101 Patent 9: 27–31, 26–28, 8: 31–34.

The Court is not convinced that Defendants’ limitation on communication between the subdivided zones is necessary. At best, Defendants’ construction seems extraneous to the claim and unsupported by the intrinsic evidence. Further, the Court finds the term “cell site divided into a plurality of subdivided zones” to have a plain and ordinary meaning that would be easy for a jury to understand in light of the claims. Therefore, the Court finds no construction necessary. Although the Court does not construe these terms, the parties may not interpret them in a manner inconsistent with this opinion.

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
7. “mobile”		
101:1 546:1 546:5	No construction is necessary.	“capable of being easily and conveniently moved from one location where the subscriber unit is operable to a second location where the subscriber unit is operable, and designed to operate without a fixed location”
8. “portable”		
101:19-20	No construction is necessary.	“capable of being easily and conveniently moved from one location where the subscriber unit is operable to a second location where the subscriber unit is operable, and designed to operate without a fixed location”

The issue of portability was extensively briefed by the parties in *Sensus* and the parties in the instant case. Eon contends that neither “mobile” nor “portable” requires a construction other than a plain and ordinary meaning. PL.’S BR. at 6, 9. Defendants contend “mobile” and “portable” are used synonymously in the patents-in-suit and therefore offer the same argument

and construction for both terms. DEF. BR. at 7. The parties' dispute comes down to the distinction drawn in the patents-in-suit between "fixed" or "stationary" and "mobile" or "portable." ('101 Patent 1:16–18 "wherein the subscriber units comprise low energy, *stationary and mobile*, digital transceivers;" '101 Patent 4:62–63 "subscriber units for digital only *fixed or mobile* communication services.") Defendants argue that Federal Circuit precedent would require these express teachings of the patent to be defined so the jury can understand that these terms "do not cover fixed or stationary products that are only theoretically capable of being moved." DEF. BR. at 8 (citing *O2 Micro*, 521 F.3d at 1362).

Here, Defendants attempt to weave the difference between "stationary" and "mobile" into a long and unnecessarily complicated definition of "portable" and "mobile." Defendants are asking for nothing that the plain and ordinary meaning of the terms cannot do on their face—distinguish from "stationary" or "fixed." Accordingly, the specification does not describe these terms other than using the words "mobile" or "portable" and describing generally how the subscriber units can be moved. '101 Patent 6:15–21, 1–4. When deciding this issue in *Sensus*, the Court previously made clear that "nothing in the specification suggests that the terms were used in a way inconsistent with their plain and ordinary meanings – *i.e.*, 'capable of being carried or moved about,' MERRIAN-WEBSTER'S COLLEGIATE DICTIONARY 907 (10th ed. 1999), or 'capable of being easily and conveniently transported.' MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS 1550 (5th ed. 1994); *see also CSS Fitness*, 288 F.3d at 1366 (stating there is 'a heavy presumption that a claim term carries its ordinary and customary meaning' (quotation omitted))."

Although the Defendants in *Sensus* were advocating a position that the subscriber units be readily operable while moving, the underlying rationale remains the same for Defendants'

current position. Based on the use of the terms throughout the ‘101 and ‘546 Patents, and their description in the specification, these terms require nothing more than an interpretation consistent with their plain and ordinary meaning. Ultimately, this is the definition Defendants attempt to offer the Court as a proposed construction, only adding an infringement-based agenda that complicates the plain and ordinary meaning of the terms as they are read in the context of the claims. The Court declines to construe the terms in light of Defendants’ accused products.

Having resolved the parties’ claim scope dispute, the Court finds the terms do not require construction because their meanings are clear in the context of the claims and will be readily understandable to the jury. *O2 Micro*, 521 F.3d at 1362; *Fenner Inv. Ltd. v. Microsoft Corp.*, No. 6:07-cv-8, 2008 WL 3981838, at *3 (E.D. Tex. Aug. 22, 2008) (finding a court need not construe a disputed term so long as it has resolved the claim scope dispute between the parties). Although the Court does not construe these terms, the parties may not interpret them in a manner inconsistent with this opinion.

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
9. “point-to-point communication”		
101:1 546:1 546:3	No construction is necessary.	“direct communication between only two points”

Initially, Eon argued no construction was necessary for “point-to-point communication.” PL.’S BR. at 24. However, at the September 6, 2012 *Markman* hearing, the Court was of the opinion that a construction was necessary and ordered supplemental briefing. Both Eon and Defendants filed supplemental briefs on “point-to-point communication.” (Doc. Nos. 216, 218).

Eon still contends no construction is necessary, but provides the following construction at the Court's request: "communication having the ability within a transmission to identify and distinguish points, including the point of origin, intermediate points, or the desired final destination point." PLAINTIFF'S SUPPLEMENTAL BRIEF at 2 (Doc. No. 216) ("PL.'S SUPP. BR."). Defendants argue that "point-to-point communication" must be direct and only between two points. DEFENDANTS' SUPPLEMENTAL BRIEF at 3 (Doc. No. 218) ("DEF. SUPP. BR."). Specifically, Defendants contend that the system must know the point of origin and the end point on any leg of signal length, and that there must only be one point of origin and one end point for each signal length. *Id.* Defendants contend that otherwise the signal would be broadcast or "point to multipoint." *Id.*

Turning first to Defendants' proposed limitation of "direct," Defendants rely on several extrinsic sources to determine how one of ordinary skill in the art would have understood "point-to-point communication" at the time of the invention. DEF. BR. at 22. Specifically, Defendants rely on a definition from *Technical Aspects of Data Communication* (3d ed. Digital Press, 1988): "1. communication connection *between only two points*; and 2. the connection is established *without the use of any intermediate terminal or computer.*" *Id.* (emphasis added). However, Defendants leave out a portion of the definition that states "[t]he connection may include switching facilities." The Abstract of the '101 and '546 Patents similarly states "[m]essages are compiled and relayed by satellite to a network switching center transmitter site for nationwide point-to-point communications." '101 ABSTRACT, '546 ABSTRACT. Thus, both the patents-in-suit and the extrinsic evidence contemplate an intermediary of at least some form, namely, a switching center. Accordingly, the Court finds "direct" to be an unnecessary limitation.

For the proposition that “point-to-point communication” be between two and only two points, Defendants also rely primarily on extrinsic evidence in the technical field. As such, the sources the Defendants rely on have at best only marginal relevance to the proper construction of “point-to-point communication” as used in the patents-in-suit. Indeed, other sources have different definitions. The MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS 1535 (5th ed. 1994), for example, defines “point-to-point communications” in the field of communications as “[r]adio communication between two fixed stations.” There is no intrinsic evidence that limits the term in the manner suggested by Defendants. In fact, the Abstract of the patents-in-suit discuss “nationwide point-to-point communication” to more than one subscriber unit at “different geographic locations,” suggesting a “only two point” limitation may be too narrow in the context of the patents-in-suit. ‘101 ABSTRACT, ‘546 ABSTRACT.

Although Eon re-urges its contention that no construction is necessary, it gives no basis, through declarations or other evidence, on which the Court could rely to conclude “point-to-point communication” could be understood by its plain and ordinary meaning.

When examining Claim 1 of the ‘101 Patent, the claim calls for:

...base station data processing and transmission facilities for transmitting to a set of local subscriber units and receiving from a subset of those local subscriber units multiplexed synchronously related digital data messages of variable lengths for *point-to-point communication* between individual subscribers with remotely located reception stations...

‘101 Patent 11:33 –39 (emphasis added).

As it reads, Claim 1 indicates that “point-to-point communication” refers to the communication link between individual subscribers and remotely located reception stations. The specification similarly explains, in reference to Figure 1, “a set of subscribers at response units 4 communicate over the wireless 218-219 MHz r-f links 5 to either a set of local remote receivers

20, each connected by a link 21 such as a telephone line to repeater cell 3, or to a local area base station repeater cell 3, one of a set of such repeater stations in different geographic locations for communicating via satellite 1 under control of a data and switching control center 2.” ‘101 Patent 5:2–9. In that context in Claim 1 of the ‘101 patent, “point-to-point communication” refers to communication between two points, namely between subscribers and the “remotely located reception stations.” That does not, however, mean that there can be only “two points,” as the Defendants’ proposed construction would require. That is, the ‘101 Patent clearly contemplates multiple subscribers communicating with one or more “remotely located reception stations.” Moreover, it also uses “point-to-point” in a broader sense in other contexts. For example, “FIG. 1 is a block system diagram of a nationwide interactive video data satellite system embodiment of the invention that provides point-to-point communications between subscriber response units in local service areas and with various vendors of goods and services.” ‘101 Patent 4:25–29. In that context, “point-to-point communications” refer to communications between subscriber response units and “various vendors of goods and services,” which may include multiple “points.”

Turning to Claim 1 of the ‘546 Patent, the claim provides:

...base station data processing and transmission means for transmitting to a set of said local subscriber units contained within said local base station geographic area associated with said local base station repeater cell means and receiving from a subset of said local set of subscriber units multiplexed synchronously related digital data messages of variable lengths for *point-to-point communication* between said local base station repeater cell means and said subset of said local subscriber units...

‘546 Patent 10:65–67, 11:1–7 (emphasis added).

In Claim 1 of the ‘546 Patent, “point-to-point communication” refers to the communication link between the “local base station repeater cell means” and the “subset” of

“local subscriber units.” Similarly, the claim language of the ‘546 Patent does not require that there can be only two points, as the Defendants’ proposed construction would suggest. The patent clearly contemplates multiple subscriber units and communication between a subscriber unit and more than one “local base station repeater cell means,” at least in the case of mobile subscriber units moving between “local base station repeater cell means.”

Accordingly, the Court construes “point-to-point communication” in the context of Claim 1 of the ‘101 Patent as a communication link between individual subscribers and remotely located reception stations. That includes multiple subscribers communicating with one or more “remotely located reception stations.” The Court construes “point-to-point communication” in the context of Claim 1 of the ‘546 Patent as a communication link between the “local base station repeater cell means” and the “subset” of “local subscriber units.” That includes multiple subscriber units and communication between a subscriber unit and more than one “local base station repeater cell means.”

Claim Language	Plaintiff’s Proposal	Defendants’ Proposal
10. “low power”		
101:1	No construction is necessary.	“effective radiated power (ERP) of not more than 0.5 Watt”

When construing “low power” in *Sensus*, the Court concluded “the specification describes ‘low power subscriber interaction units’ as the sort of units intended for use on the FCC 218-219 MHz band. ‘101 Patent at 1:30–35. The maximum effective radiated power of such units was less than twenty Watts. *Id.* at 1:33–35. Thus, the specification defines ‘lower power’ and ‘limited power’ to ‘a maximum effective radiated power of less than twenty Watts.’”

SENSUS ORDER at 46.

Defendants now offer a new prosecution history estoppel argument, limiting “low power” to less than 0.5 Watt. DEF. BR. at 19. “The doctrine of prosecution disclaimer is well established in Supreme Court precedent, precluding 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) (internal citations omitted). However, the purported disclaimer must not merely be an isolated statement, lending ambiguity to whether the patent applicant clearly disavowed the particular subject matter; it must be clear and unambiguous to constitute a clear disavowal of scope. *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1356–57 (Fed. Cir. 2004).

Defendants argue that Eon “clearly disavowed claim scope for systems having greater than 0.5 Watts ERP by representing to the European Patent Office (“EPO”) in 1996 that a prior art patent system having 0.5 Watts ERP does not disclose ‘low power.’” DEF. BR. at 19–20. The EPO examiner rejected Eon’s claims on June 13, 1996 over the prior art teaching of Freedburg, which incorporates by reference the Cooper Patent (U.S. Patent No. 3,906,166) (the “‘166 Patent”). It is the Cooper Patent, referenced in the Freedburg Patent, that discloses a 1 Watt raw output transmitter amplifier. ‘166 Patent Fig. 9. Defendants argue that through Eon’s response arguing the dependent claims are independently patentable, they disclaimed coverage over systems having 1 Watt or greater transmitter amplifiers. DEF. BR. at 20. Accordingly, because Eon argues there is attenuation in the output path of 50%, Defendants claim the transmitter amplifier is attenuated to 0.5 Watt ERP.

The Court disagrees with Defendants that Eon’s response was a clear and unambiguous disavowal of claim scope. In Eon’s response, it argued simply that the amended claims are different from the cited references due to their dependency on Claim 1, and merely distinguished

that Claim 8 recites the maximum peak output power of the subscriber units in the milliwatt power range. EON RESPONSE TO EPO December 19, 1996, at M-76. The Cooper reference is only a reference within the prior art cited by the EPO examiner, and Eon's statement does not clearly and unambiguously disclaim systems with ERP greater than 0.5 Watt. Under these facts, such a reference is too tenuous to constitute a clear and unambiguous disclaimer. As such, the Court finds Defendants' prosecution history estoppel argument unpersuasive.

The Court therefore adopts its *Sensus* opinion in construing "low power."

CONCLUSION

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

So ORDERED and SIGNED this 20th day of November, 2012.



JOHN D. LOVE
UNITED STATES MAGISTRATE JUDGE