

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

ALSTOM GRID LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 15-72-LPS-CJB
	)	
CERTIFIED MEASUREMENT, LLC,	)	
	)	
Defendant.	)	

**REPORT AND RECOMMENDATION**

In this action filed by declaratory judgment Plaintiff Alstom Grid LLC (“Plaintiff” or “Alstom Grid”) against declaratory judgment Defendant Certified Measurement, LLC (“Defendant” or “CML”), CML alleges infringement of United States Patent Nos. 5,828,751 (the “751 patent”), 6,282,648 (the “648 patent”) and 6,289,453 (the “453 patent”) (the “asserted patents” or the “patents-in-suit”).<sup>1</sup> Presently before the Court is the matter of claim construction. The Court recommends that the District Court adopt the constructions set forth below.

**I. BACKGROUND**

**A. The Parties**

Alstom Grid is an Ohio corporation with its principal place of business in Philadelphia, Pennsylvania. (D.I. 1 at ¶ 2) It supplies supervisory control and data acquisition (“SCADA”) technology solutions to customers in the power industry. (*Id.* at ¶ 14)

CML is a Delaware limited liability company, with its principal place of business in Stamford, Connecticut. (*Id.* at ¶ 3; D.I. 16 at 2 at ¶ 3) CML is the indirect subsidiary of Walker Digital, LLC, which is a research and development laboratory “that invents solutions to large-

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<sup>1</sup> CML had also at one time asserted infringement of U.S. Patent No. 8,549,310 (the “310 patent”), (*see* D.I. 16), but is no longer asserting that patent, (D.I. 68).

scale problems for businesses and their customers” and which is the entity responsible for the inventions disclosed in the asserted patents. (D.I. 16 at 5 at ¶¶ 6, 9; *see also* D.I. 61 at 1) CML owns the asserted patents by assignment. (D.I. 1 at ¶ 11; D.I. 16 at 5-6 at ¶ 9)

## **B. The Asserted Patents**

The three asserted patents in this action, each entitled “Method and Apparatus for Secure Measurement Certification[,]” are related and share substantially identical specifications. (D.I. 56, exs. A-C;<sup>2</sup> *see also* D.I. 61 at 1 n.1; D.I. 62 at 1 n.2)<sup>3</sup> The '751 patent issued on October 27, 1998 from U.S. Appl. No. 628,920, which was filed on April 8, 1996. ('751 patent) The '453 patent is a divisional of the application that led to the '751 patent, and was issued on September 11, 2001. ('453 patent) The '648 patent is a continuation of the application that led to the '453 patent, and was issued on August 28, 2001. ('648 patent) The asserted patents are among a family of patents that claim priority to the original application for the '751 patent. (D.I. 85 at 10-11)

The asserted patents are “directed to secure measurement acquisition and certification.” (D.I. 16 at 6 at ¶ 13; *see also* '751 patent, Abstract) The patents explain that physical measurements are vital to guiding various activities with significant economic and safety implications—predicting the weather, for instance, or securing military communications. ('751 patent, cols. 1:43-54, 3:43-48) In circumstances where a physical measurement must be acquired

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<sup>2</sup> The asserted patents appear on the docket in this action more than once, including as exhibits to the Joint Claim Construction Chart. (D.I. 56, exs. A-C) Citations to the patents will simply be to the '751 patent, '648 patent and '453 patent.

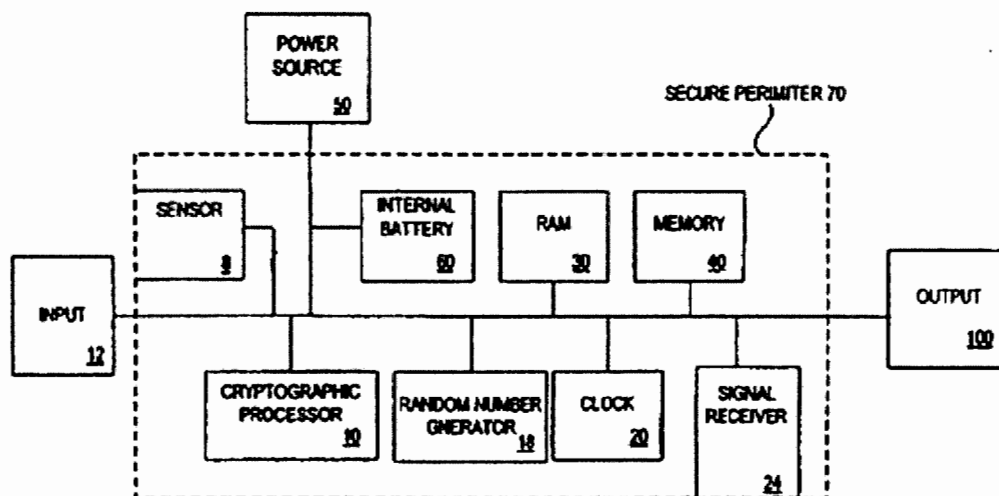
<sup>3</sup> In light of this, the Court will cite only to the '751 patent unless otherwise noted, and when the Court hereafter refers to “the patent” or “the patent specification,” that is a reference to the '751 patent unless otherwise noted.

and communicated to a person who was not present when the measurement was taken, it is important for the recipient to be capable of verifying certain aspects of that measurement (such as the measurement itself, the time when the measurement was taken, the site of the measurement, and the individuals who were present during the taking of the measurement). (*Id.*, col. 1:48-54)

The patent describes a prior art system (known as “Simmons”) that was designed to permit the United States to monitor nuclear weapons testing in Russia, via the insertion of a seismic signal sensor and public key cryptographic system into a borehole for time-stamping and encrypting measurements of seismic vibrations. (*Id.*, col. 2:17-23) Simmons was designed to permit individuals in Russia to monitor the measurements, but also to permit the measurements to be transmitted to the United States so that those in this country could monitor them as well. (*Id.*, col. 2:23-35) According to the specification, however, the Simmons system did not disclose techniques for assuring certain important aspects of the measurement, such as the location of the sensor at the time of measurement or who was present at the time of measurement. (*Id.*, col. 2:53-61) The patent also describes prior art systems (such as cameras) capable of assuring the authenticity and/or integrity of *digital* data (such as images); these systems, however, were not directed to the certification of physical measurements. (*Id.*, cols. 2:62-3:40)

The patent purports to fill a need, then, in its disclosure of “methods and apparatuses for acquiring a physical measurement, and for creating a cryptographic certification of that measurement, such that its value and time can be verified by a party that was not necessarily present at the measurement.” (*Id.*, Abstract; *see also id.*, cols. 1:6-11, 3:53-58) These methods and apparatuses result in the production of “a cryptographically assured, timestamped, certified measurement.” (*Id.*, col. 4:6-9) Figure 1 of the '751 patent, corrected through a Certificate of

Correction, depicts an embodiment of the claimed measurement certification device:



In the “simplest embodiment of the invention,” the device “takes a physical measurement using sensor 8, of any physical parameter or event[.]” (*Id.*, col. 7:58-60) This physical measurement is then added “to a time from clock 20,” creating “an augmented measurement[.]” (*Id.*, cols. 7:66-8:2) The augmented measurement is then cryptographically processed to prevent subsequent alteration of the measurement and/or the time of measurement. (*Id.*, cols. 8:2-6, 12:15-18) The “[c]ryptoprocessor 10” then “outputs the certified measurement at output device 100.” (*Id.*, col. 8:2-6)

In other embodiments of the inventions, corroborative data may also be included in the certified measurement; this data allows the user to know that the device was working properly at the time of the measurement. (*Id.*, Abstract & col. 6:12-32) Some claims of the asserted patents also call for the certified measurement to be performed in such a way that the device’s components are resistant to tampering, that is, in a “tamper-resistant manner.” A tamper-resistant manner, both parties agree, means “[w]ithin a secure perimeter that has physical and/or

electronic features to resist tampering” so as to prevent corruption of the measurement. (D.I. 84, ex. 1; '751 patent, col. 7:23-57)

### **C. Procedural Posture**

On January 22, 2015, Alstom Grid commenced this action, seeking a declaratory judgment that its various SCADA systems do not infringe the asserted patents directly or indirectly and/or that the asserted patents are invalid. (D.I. 1) On March 17, 2015, CML filed its Amended Answer and Counterclaims, alleging that Alstom Grid directly and indirectly infringes the asserted patents. (D.I. 16) On September 16, 2015, Chief Judge Leonard P. Stark referred this case to the Court to hear and resolve all pretrial matters, up to and including the resolution of case-dispositive motions. (D.I. 50)

The parties filed simultaneous opening claim construction briefs on December 11, 2015, and simultaneous responsive briefs on May 27, 2016.<sup>4</sup> (D.I. 61, 62, 81, 82) The Court held a *Markman* hearing on July 22, 2016. (D.I. 85 (hereinafter “Tr.”))

## **II. STANDARD OF REVIEW**

It is well-understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention.” *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989). Claim construction is a generally a question of law, although subsidiary fact finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38

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<sup>4</sup> The case was stayed pending *inter partes* review (“IPR”) of the asserted patents, pursuant to a joint Stipulation filed by the parties, from January 5, 2016 to February 24, 2016. (See D.I. 65, 66) The stay was lifted upon the termination of the IPR proceedings; those proceedings ended with no final decision being made by the United States Patent and Trademark Office’s Patent Trial and Appeal Board as to the validity of the asserted patents. (D.I. 66)

(2015).

The Court should typically assign claim terms their “ordinary and customary meaning[,]” which is “the meaning that the term[s] would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (citations omitted). However, when determining the ordinary meaning of claim terms, the Court should not extract and isolate those terms from the context of the patent, but rather should endeavor to reflect their “meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321; *see also Eon Corp. IP Holdings v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1320 (Fed. Cir. 2016).

In proceeding with claim construction, the Court should look first and foremost to the language of the claims themselves, because “[i]t 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*, 415 F.3d at 1312 (internal quotation marks and citations omitted). For example, the context in which a term is used in a claim may be “highly instructive.” *Id.* at 1314. In addition, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable” in discerning the meaning of a particular claim term. *Id.* This is “[b]ecause claim terms are normally used consistently throughout the patent, [and so] the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” *Id.* Moreover, “[d]ifferences among claims can also be a useful guide[,]” as when, for example, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* at 1314-15.

In addition to the words of the claims, the Court should look to other intrinsic evidence.

For example, the Court should analyze the patent specification, which “may reveal a special definition given to a claim term . . . that differs from the meaning [that term] would otherwise possess.” *Id.* at 1316. In that case, “the inventor’s lexicography governs.” *Id.* Even if the specification does not contain a special definition of the term at issue, it “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.* at 1315 (internal quotation marks and citation omitted). That said, however, the specification “is not a substitute for, nor can it be used to rewrite, the chosen claim language.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). In addition to the specification, a court should also consider the patent’s prosecution history, if it is in evidence, because it “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution[.]” *Phillips*, 415 F.3d at 1317.

Extrinsic evidence, “including expert and inventor testimony, dictionaries, and learned treatises[.]” can also “shed useful light on the relevant art[.]” *Id.* (internal quotation marks and citations omitted). Overall though, while extrinsic evidence may be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Id.* (internal quotation marks and citations omitted); *accord Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980-81 (Fed. Cir. 1995).

In utilizing these resources during claim construction, courts should keep in mind that “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

### III. DISCUSSION

The parties identified one set of terms for the Court to construe: “certifiable measurement” and “certified measurement.”<sup>5</sup> While CML asserts infringement of multiple claims of the asserted patents, the use of the term “certifiable measurement” in claims 57 and 102 of the '751 patent, and the use of the term “certified measurement” in claim 142 of the '648 patent, are representative. Accordingly, these claims are reproduced below, with the disputed terms highlighted:

- 57.** A device for secure measurement acquisition and certification, comprising:
- a sensor;
  - a time generator for transmitting a representation of a time;
  - a signal generator; and
  - a computing device, including a computer processor and a memory, coupled to receive a measurement signal representative of a physical parameter from the sensor, the representation of the time from the time generator, and a corroborative datum indicative of an operating condition of the device from the signal generator, said computing device forming an augmented measurement including the measurement signal, the representation of the time, and the corroborative datum, and performing a cryptographic operation on at least a portion of the augmented measurement to form a *certifiable measurement*.

('751 patent, cols. 20:65-21:14 (emphasis added))

- 102.** A method for measuring and certifying a physical parameter, comprising the steps of:
- measuring a physical parameter to provide a measurement signal representative thereof;
  - receiving an external timing signal;

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<sup>5</sup> While the parties originally disputed the proper constructions of several additional terms, (D.I. 61, 62, 81, 82), they have worked diligently to resolve most of their claim construction disputes, leaving “certifiable measurement” and “certified measurement” as the only remaining terms now requiring construction by the Court, (D.I. 84).



producing an augmented measurement including the measurement signal and a representation of the external timing signal; performing a cryptographic operation on at least a portion of the augmented measurement to form a *certifiable measurement*; and outputting the *certifiable measurement*.

(*Id.*, col. 23:3-15 (emphasis added))

- 142.** A method for measuring and certifying a physical parameter, comprising the steps of:
- (a) measuring a physical parameter to provide a digital signal representative thereof;
  - (b) providing an external timing signal;
  - (c) forming an augmented measurement including the digital signal and a representation of the external timing signal;
  - (d) performing a cryptographic operation on at least a portion of the augmented measurement to form a *certified measurement*; and
  - (e) outputting the *certified measurement*;
- wherein the steps of measuring the physical parameter, receiving the external timing signal, forming the augmented measurement, and performing the cryptographic operation are performed in a tamper-resistant manner.

('648 patent, col. 24:21-37 (emphasis added))

The parties have raised two separate disputed issues regarding these terms. These disputes are reflected in the parties' competing proposals, which are set out in the chart below along with an identification of the asserted claims that contain the terms:

<b>Term</b>	<b>Alstom Grid's Construction</b>	<b>CML's Construction</b>
<b>certifiable measurement</b> ('751 patent: claims 57, 64, 67-68, 102, 108-10, 114, 125, 136, 139, 144, 161, 163, 166-69, 173; '453 patent: claim 43)	physical measurement, which has not yet been deciphered	an augmented measurement, which has not yet been deciphered
<b>certified measurement</b> ('648 patent: claims 142-43)	physical measurement, which has not yet been deciphered	an augmented measurement, which may or may not be deciphered

(D.I. 84, ex. 1) The first issue with respect to the proper construction of these terms is what type of measurement is a certifiable/certified measurement—a “physical measurement” (Alstom Grid’s position) or an “augmented measurement” (CML’s position)? The second issue is whether “certifiable measurement” and “certified measurement” both always mean the same thing? That is, do both terms refer to a (physical/augmented) measurement “which has not yet been deciphered” (Alstom Grid’s position), or should “certified” be construed to mean, in contrast to “certifiable,” a (physical/augmented) measurement “which may or may not be deciphered” (CML’s position)? For the reasons discussed below, the Court agrees with CML’s position with respect to both disputes.

**A. “Physical” or “Augmented” Measurement?**

As described above, the invention involves the taking of a physical measurement and adding additional information to that measurement in order to create an augmented measurement; thereafter, a cryptographic operation (e.g., encryption) is performed on a portion of that package to create a measurement output—so as to ensure the security of the information. (*See, e.g.*, '751 patent, cols. 4:1-26, 20:65-15; Tr. at 16-17) The parties’ first dispute concerns what portion of the measurement the cryptographic operation must be performed upon.

Alstom Grid asserts that the cryptographic operation must *always* be performed on *at least* the physical measurement portion of the augmented measurement, so that at least the physical measurement remains secure and encrypted when the certified measurement is outputted from the device. (*See, e.g.*, Tr. at 63-66, 68-69) CML counters that the claims do not absolutely require that; instead, the claims recite that the cryptographic operation is performed on at least a portion of the augmented measurement (a portion that does not necessarily have to include the

physical measurement). (*See, e.g., id.* at 23, 67-68)

In resolving the parties' dispute here, the Court looks first and foremost to the claim language itself. And that language is illuminating.

The claim language could not be clearer in reciting that the cryptographic operation is performed “on *at least a portion of the augmented measurement*” to form the certifiable/certified measurement. (*See, e.g., '751 patent, col. 21:12-14 (emphasis added)*) The claim language further discloses that the augmented measurement is made up of a package of information that includes more than just the physical measurement (with the particular additional information varying by claim). For example, in claim 57 of the '751 patent, the augmented measurement includes: (1) the measurement signal that is representative of a physical parameter from the sensor (i.e., the physical measurement); (2) the representation of the time; and (3) corroborative datum reflecting the operating condition of the device. (*Id.*, col. 21:5-12) Meanwhile, in claim 102 of the '751 patent, the augmented measurement includes: (1) the physical measurement; and (2) the representation of the time. (*Id.*, col. 23:8-10) Therefore, with the claims reciting that (a) the cryptographic operation is performed on “at least a portion” of the “augmented measurement” (which we know includes not just the physical measurement, but also other pieces of information) to form the certifiable/certified measurement and (b) because the claim does not require that any particular “portion” of that “augmented measurement” be the portion on which cryptography is performed, then (c) the claims facially must allow for the possibility that such operation can be performed only on something other than the physical measurement. Said differently (or at least a little more succinctly): the plain language of the claims does not require the cryptographic operation, in all circumstances, to be performed on at least the physical

measurement portion of the augmented measurement.

Indeed, as CML points out, (Tr. at 25; CML’s Markman Hearing Slides Presentation at Slide 18), Alstom Grid’s own claim construction brief acknowledged this very point. At that time, the parties’ competing proposals for the “certified” terms were slightly different than their current proposed constructions, and they did not specifically address this current dispute. (*See* Tr. at 20-21) In the briefing, CML’s proposed construction for “certifiable measurement” was “[a] measurement, which has not yet been deciphered, formed by performing a cryptographic operation on at least the physical measurement portion and/or the time of measurement portion of the augmented measurement.”<sup>6</sup> (D.I. 61 at 10) In response, Alstom Grid had argued that the latter portion of CML’s proposed constructions (“formed by performing a cryptographic operation on at least . . .”) was improper because, *inter alia*, it contradicted the language of the claims in some circumstances:

[T]he content of the “augmented measurement” varies by claim *and the claims do not even require that the cryptographic operation be performed on the physical measurement portion or time-of-measurement portion of the augmented measurement . . . .* Rather, the cryptographic operation can be performed on the corroborative datum portion, or the device identification portion, or the second physical measurement portion, for example.

(D.I. 81 at 14 (emphasis added)) Thus, Alstom Grid’s current position—that these terms should be construed to mean “physical measurement, which has not yet been deciphered”—certainly appears to stand in contrast to its previous argument, and, even more importantly, to the claim

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<sup>6</sup> In a similar vein, CML’s proposed construction for “certified measurement” was “[a] measurement formed by performing a cryptographic operation on at least the physical measurement portion and/or the time of measurement portion of the augmented measurement[.]” (D.I. 61 at 11)

language itself.

In fighting back against CML's position here, Alstom Grid points to the specification for support. That is, Alstom Grid asserts that the whole point of the invention as reflected in the specification is the formation of a secure physical measurement. And so, it argues, there cannot possibly be a scenario in which the claims would allow the physical measurement portion of the augmented measurement to be un-encrypted as it leaves the device in question. (*See* Tr. at 60-61, 68; Alstom Grid's Hearing on Claim Construction Presentation, Slides 8-10)

The Court acknowledges that many portions of the specification make reference to the *physical* measurement as the thing that is to be subject to cryptographic certification. (*See, e.g.*, '751 patent, col. 1:8-11 (noting that the invention relates to "certifying physical measurements"); *see also id.*, Abstract (explaining that the "invention relates to methods and apparatuses for *acquiring a physical measurement*, and for creating a *cryptographic certification of that measurement*, such that it[] . . . can be verified by a party that was not necessarily present at the measurement") (emphasis added); *id.*, col. 3:53-55 ("An object of the present invention is to provide an apparatus and method for acquiring and *certifying a physical measurement*[".]") (emphasis added)) But the patent does *not* exclusively and uniformly convey that the cryptographic operation must always be performed on at least the physical measurement portion of the augmented measurement. For instance, as CML's counsel pointed out during oral argument, (Tr. at 83), in the course of describing one possible embodiment of the invention, the specification states:

Still greater assurance of integrity and authenticity can be obtained by encrypting part or all of the measurement in cryptoprocessor 10 using a key stored in memory 40. For example, instead of

hashing, *the physical measurement and/or time* might be encrypted with a device-specific private key if authenticity is required, with a recipient-specific public key if confidentiality is required, or with both.

(’751 patent, col. 9:1-7 (emphasis added)) In this example, the cryptographic operation (i.e., encryption) is performed on the physical measurement, *or* the time, or both, in order to form the certifiable measurement.

In sum, CML’s claims themselves are plainly broader than what Alstom Grid’s proposal would require with respect to this dispute. Nor does the specification wholly support Alstom Grid’s position. Therefore, the Court concludes that the “augmented measurement” portions of CML’s proposed constructions for these terms properly captures the breadth of the intrinsic evidence. This phraseology allows for the *possibility* that the physical measurement portion of the augmented measurement is encrypted in any given circumstance, while not absolutely *requiring* that the physical measurement portion of the augmented measurement must always be encrypted. Therefore, the Court recommends that the “augmented measurement” portions of CML’s proposed constructions for these terms be adopted.

**B. Do “Certifiable” and “Certified” Mean the Same Thing?**

As to the second dispute, both parties agree that a “certifiable measurement” is a measurement “which has not yet been deciphered.” But the parties dispute whether a “certified measurement” should be construed to have the same meaning as “certifiable measurement,” or whether it should instead be construed more broadly to refer to a measurement “which *may or may not be* deciphered.” (D.I. 84, ex. 1 (emphasis added); *see also* Tr. at 26)

Here again, the Court begins with the claim language. Though the term “certifiable” is

not used at all in the specification—instead, the specification uniformly refers to a “certified measurement”—all the claims of the '751 patent use “certifiable measurement.” In contrast, all the claims of the '648 patent use “certified measurement.” And the claims in the '453 patent use *both* terms—claim 1 uses “certified measurement” while the remainder of the claims use “certifiable measurement.”<sup>7</sup>

And so, what the claim language offers here is that it simply underscores the fact that two different terms are being used to denote what is outputted from a device: “certifiable” and “certified” measurements. (*See* Tr. at 36-37, 52) The fact that different claims across the related patents use these two *different* terms is meaningful in and of itself. (*See id.* at 27) Even Alstom Grid acknowledged this, when it noted that, “[a]t first blush, it would appear that the terms ‘certifiable’ and ‘certified’ should mean two different things based on their plain meaning.” (D.I. 81 at 10) Indeed, accepting Alstom Grid’s proposed constructions here would run afoul of the general presumption that “different [claim] terms have different meanings[.]” *Chicago Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012); *see also* *Forest Labs., Inc. v. Teva Pharms. USA, Inc.*, C.A. No. 14-121-LPS, 2016 WL 54910, at \*11 (D. Del. Jan. 5, 2016); *W.L. Gore & Assocs., Inc. v. C.R. Bard, Inc.*, Civil Action No. 11-515-LPS-CJB, 2014 WL 3950663, at \*9 (D. Del. Aug. 8, 2014). This presumption, known as claim differentiation, may be applied between related patents. *See, e.g.,* *Forest Labs., Inc.*, 2016 WL 54910, at \*8, \*11; *St. Clair Intellectual Prop. Consultants, Inc. v. Acer, Inc.*, No. CA 09-354-

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<sup>7</sup> The Court notes that the claims of the '310 patent—originally asserted in this action, but no longer at issue—also use both “certified measurement” and “certifiable measurement.” (*See, e.g.,* '310 patent, claims 1, 14)

LPS, CA 09-705-LPS, CA 10-282-LPS, 2012 WL 3536454, at \*8 (D. Del. Aug. 7, 2012).<sup>8</sup>

In assessing whether this presumption should stand here, the Court next turns to the prosecution history of the '751 patent. There, the applicants explained the meaning of a “certifiable measurement” in a way that explicitly distinguishes it from “certified measurement.” The Examiner had originally rejected the claims of the '751 patent as indefinite, explaining that, *inter alia*, applicants’ use of the claim term “certifiable” (which again, does not appear in the specification) was “indefinite and unclear in context[.]” (D.I. 61, ex. A at 21) In response, the applicants explained:

Regarding “certifiable,” Applicants selected that word *to more particularly point out the subject matter which Applicants regard as their invention. According to the present invention, the claimed device and method output an encrypted code representing a measurement. The measurement may be certified at a later time by deciphering the encrypted code. Accordingly, the measurement output by applicant’s invention is more appropriately described as “certifiable” because it has not been certified/deciphered. During the telephone interview, the Examiner indicated that the term “certifiable” was acceptable based on support found in the specification at [column 3, lines 63-67].*

(*Id.* at 21-22 (emphasis added)) Thus, in defining a “certifiable” measurement as one that “*has not been certified/deciphered*” here, the applicants were clearly contrasting it with a measurement

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<sup>8</sup> A close examination of the claims reflects at least one apparent difference with respect to the claims that use “certified” and those that use “certifiable.” Every time “certified measurement” is used in a claim, the claim also discloses a “*digital* signal representative of” a physical measurement or parameter. (’648 patent, claims 1, 47, 93, 141, 142, 143; ’453 patent, claim 1 (emphasis added); *see also* ’310 patent, claim 1 (disclosing “certified measurement” and a computing device coupled to receive, *inter alia*, “a digital signal being based at least in part on a physical measurement from the sensor”)) Meanwhile, most claims that use “certifiable measurement” do not disclose a “digital” signal (although a few claims do). (*See, e.g.*, ’751 patent, claims 25, 56, 93; ’453 patent, claims 6 and 23) The parties did not note this distinction in their briefing, however, and so it may be nothing more than a curiosity.



that (at least in some instances) *already has been* “deciphered.”

Alstom Grid zeroes in on the last sentence of the excerpt above from the prosecution history, in support of its position. (D.I. 81 at 11-12; Alstom Grid’s Hearing on Claim Construction Presentation, Slides 17-18) The portion of the patent specification referenced in that last sentence (column 3, lines 63-67) states that “*terms such as certified measurement, certified message, certification, and other equivalents* may all be used to denote the output of the measurement certification device.” (’751 patent, col. 3:63-67 (emphasis added)) According to Alstom Grid, “certifiable measurement” is one such “equivalent” to “certified measurement,” and “with the patentee defining these claim terms to be equivalent in the specification and prosecution history, both of these claim terms should be construed to mean a measurement that has not yet been deciphered.” (D.I. 81 at 12)

The Court is not persuaded by this argument. Instead—and in light of the patentee’s clear contrast of “certifiable” with “certified” elsewhere in the prosecution history excerpted above—the Court concludes that there is a far less strained reading of the meaning of the excerpt’s last sentence. That is, “certifiable measurement” could be an “equivalent” to “certified measurement” in the sense that both terms amount to forms of “the output of the measurement certification device.” (*See* Tr. at 37-38) This does not mean, however, that both terms must mean the exact same thing or in all instances refer to exactly the same type of output (i.e., an output that, in all cases, is not yet deciphered).

And so, taking all of the above into account, the Court agrees with CML’s argument that “certified” and “certifiable” must mean different things. That still leaves the question of what exactly “certified” means.

On that score, as explained above, the specification makes clear that both a “certified measurement” and a “certifiable measurement” refer to “the output of the measurement certification device.” (’751 patent, col. 3:64-67) And both parties agree that “certified measurement” encompasses *at least* a measurement which has not yet been deciphered (or decrypted). (D.I. 84, ex. 1; Tr. at 38) This is in line with the specification, which, at times, does appear to refer to a “certified measurement” that has not yet been deciphered. (*See, e.g.*, ’751 patent, cols. 7:58-8:6 (“In the simplest embodiment of the invention . . . [c]ryptoprocessor **10** then creates a certified measurement comprising the (cleartext) augmented measurement and a (ciphertext) one-way function representative of at least a portion of the augmented measurement, and outputs the certified measurement at output device **100**.”); Tr. at 49-50)

CML’s proposal is broader than that, however, as it argues that “certified measurement” refers to a measurement output of the measurement certification device that “*may or may not be deciphered.*” At this juncture, it is not entirely clear to the Court why it would make sense for the device at issue to both encrypt and then decipher (i.e., decrypt) at least a portion of an augmented measurement, before outputting that measurement from the claimed device. (Tr. at 75) But the Court also does not have a basis to say that such a scenario is impossible. Indeed, as set out above, the patentee could not have been clearer in the prosecution history in explaining that a “certified” measurement can encompass a measurement that has already been deciphered.<sup>9</sup>

Moreover, the specification does not foreclose the possibility that a “certified”

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<sup>9</sup> Indeed, one way in which the above-referenced portion of the prosecution history could be read is that “certified” *only* means a measurement that “is deciphered.” (Tr. at 32, 73; *see also* D.I. 61, ex. A at 22) But neither party is proposing such a construction; rather, both parties agree that the term means, at minimum, a (physical/augmented) measurement that may *not be* deciphered.

measurement can refer to a measurement that has already been deciphered. Alstom Grid makes an argument to the contrary, but the Court does not find that argument persuasive.

In making this argument, Alstom Grid claims that the specification “consistently refers to a ‘certified measurement’ as something that has not yet been *verified*[,]” (Tr. at 74 (emphasis added)), which, in Alstom Grid’s view, means a measurement that has not yet been deciphered/decrypted, (*id.* at 54-55 (Alstom Grid’s counsel asserting that “verified” means “decipher” and “decrypt”—that all three terms mean “the same thing”)). With this as a given, Alstom Grid then points, for example, to the “Summary of the Invention” portion of the specification, (*id.* at 74), which explains that:

An object of the present invention is to provide an apparatus and method for acquiring and certifying a physical measurement . . . in a manner that the physical measurement . . . can be *verified by a later recipient of the certified measurement*.

(’751 patent, col. 3:53-58 (emphasis added)) In other words, here Alstom Grid is asserting that “certified” has to mean the same thing as “certifiable” (a measurement “which has not yet been deciphered”) because the specification uniformly refers to *certified* measurements as measurements that still need to be *verified*. And since in Alstom Grid’s view “verifying” is the same thing as “deciphering” (or “decrypting”), then a certified measurement could not be (as CML’s proposal allows for) a measurement that has already been deciphered.

The Court disagrees, largely due to the fact that while the specification makes it clear that verification is a type of cryptographic operation, it also indicates that “verifi[cation]” can refer to a process that is not always synonymous with deciphering or decryption. (Tr. at 39) This is suggested by the section of the specification entitled “Certified Measurement Verification[,]”

which explains that:

In cases where the *certified measurement* uses hashing, the recipient need only read the cleartext part (physical measurement and/or time) and recompute the hash *to verify* the ciphertext part. If the received and recomputed hashes agree, the measurement has not been changed.

In cases where the measurement is encrypted in the corresponding device private key, the recipient can then simply *decrypt the measurement* and perform any other cryptographic operations needed to *verify the measurement*.

('751 patent, col. 11:8-16 (emphasis added)) This passage, then, notes that the recipient can decrypt the message and then do other things to it to “verify” it. Yet if “verify” and “decrypt” always meant exactly the same thing (as Alstom Grid says they do), then this passage would not make any sense—because here the recipient has already “decrypt[ed] the measurement” before it then performs “other” cryptographic operations on the measurement in order to further “verify” it. Similarly, in an earlier portion of the specification, the patentee explains that “if the measurement was encrypted with the device private key, the recipient can use the corresponding device public key *to decrypt and verify the measurement*.” (*Id.*, col. 5:57-60 (emphasis added)) Applying Alstom Grid’s position here, that passage would be nonsensical, as it would read that the recipient can use the corresponding device private key “to decrypt and decrypt the measurement.”

Therefore, if decryption and verification can in fact amount to two separate activities, then the portions of the specification that refer to the verification of a “certified measurement” do not necessarily undercut CML’s position. Those portions could well be referring to verification of measurements *that have already been deciphered*. (See, e.g., '751 patent, col. 11:8-16; see

*also id.*, col. 5:49-60 (explaining that “a recipient of the *certified measurement* can determine its authenticity and/or integrity by performing cryptographic operations on the cleartext and/or ciphertext parts of the certified measurement. For example, in the case of a hashed measurement, the recipient can *verify* the measurement by recomputing the hash and comparing it with the received hash”) (emphasis added))

In sum, the Court finds that CML’s proposal for “certified measurement” best comports with the claim language itself and the other intrinsic evidence. The term should not be construed to mean the same thing as “certifiable measurement”—that is, “an augmented measurement, which has not yet been deciphered.” Instead, it should be construed to mean “an augmented measurement, which may or may not be deciphered.”

#### IV. CONCLUSION


For the foregoing reasons, the Court recommends the following constructions:

1. “certifiable measurement” means “an augmented measurement, which has not yet been deciphered”
2. “certified measurement” means “an augmented measurement, which may or may not be deciphered”

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation. Fed. R. Civ. P. 72(b)(2). The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the district court. *See Sincavage v. Barnhart*, 171 F. App’x 924, 925 n.1 (3d Cir. 2006); *Henderson v. Carlson*, 812 F.2d 874, 878–79 (3d Cir. 1987).

The parties are directed to the Court's Standing Order for Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the District Court's website, located at <http://www.ded.uscourts.gov>.

Dated: August 3, 2016

  
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Christopher J. Burke  
United States Magistrate Judge