IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

OSSEO IMAGING, LLC,	:	
	:	
Plaintiff,	:	
	:	
v.	:	C.A. No. 17-1386-LPS
	:	
PLANMECA USA, INC.,	:	
	:	
Defendant.	:	

Stephen B. Brauerman and Sara E. Bussiere, BAYARD, P.A., Wilmington, DE

Seth H. Ostrow, Jeffrey P. Weingart, and Antonio Papageorgiou, MEISTER SEELIG & FEIN LLP, New York, NY

Attorneys for Plaintiffs.

Jack B. Blumenfeld and Michael J. Flynn, MORRIS, NICHOLS, ARSHT & TUNNELL LLP, Wilmington, DE

Wasif H. Qureshi, Leisa T. Peschel, and David K. Wooten, JACKSON WALKER LLP, Houston, TX

Attorneys for Defendants.

MEMORANDUM OPINION

October 30, 2018
Wilmington, Delaware

STARK, U.S. District Judge:

Plaintiff Osseo Imagining, LLC ("Osseo" or "Plaintiff") filed suit against Defendant Planmeca USA, Inc. ("Planmeca" or "Defendant") on October 3, 2017, alleging infringement of U.S. Patent Nos. 6,381,301 (the "'301 patent"), 6,944,262 (the "'262 patent"), and 8,498,374 (the "'374 patent") (collectively, the "patents-in-suit"). (D.I. 1) The patents-in-suit relate to orthopedic imaging systems that use X-ray beam techniques to create tomographic and/or densitometric models of a scanned object.

Presently before the Court is the issue of claim construction. The parties completed briefing on August 10, 2018. (*See* D.I. 31, 33, 36, 37) The Court held a claim construction hearing on August 27, 2018. (*See* D.I. 41) ("Tr.") The parties submitted supplemental briefing on certain issues on September 11 and 18, 2018. (D.I. 42; D.I. 43)

I. LEGAL STANDARDS

A. CLAIM CONSTRUCTION

The ultimate question of the proper construction of a patent is a question of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). "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) (citation and internal quotation marks omitted). "[T]here is no magic formula or catechism for conducting claim construction." *Id.* at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources "in light of the statutes and policies that inform patent law." *Id.*

"[T]he words of a claim are generally given their ordinary and customary meaning. . . . [which is] the meaning that the term 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."

Id. at 1312-13 (internal citations and quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). The patent "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." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While "the claims themselves provide substantial guidance as to the meaning of particular claim terms," the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . . [b]ecause claim terms are normally used consistently throughout the patent." *Id.* (internal citation omitted).

It is likewise true that "[d]ifferences among claims can also be a useful guide . . . . 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 (internal citation omitted). This "presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that "the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. It bears emphasis that "[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Hill-Rom Servs., Inc. v. Stryker*

Corp., 755 F.3d 1367, 1372 (Fed. Cir. 2014) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)) (alteration in original) (internal quotation marks omitted).

In addition to the specification, a court "should also consider the patent's prosecution history, if it is in evidence." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). The prosecution history, which is "intrinsic evidence," "consists of the complete record of the proceedings before the [Patent and Trademark Office] and includes the prior art cited during the examination of the patent." *Phillips*, 415 F.3d at 1317. "[T]he prosecution history 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, making the claim scope narrower than it would otherwise be." *Id.*

"In some cases, . . . the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. "Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries "endeavor to collect the accepted meanings of terms used in various fields of science and technology." *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful "to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Id.* Nonetheless, courts must not lose sight of the fact that "expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer

from bias that is not present in intrinsic evidence." *Id.* Overall, while extrinsic evidence "may be useful to the court," it is "less reliable" than intrinsic evidence, and its consideration "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, "[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). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GmbH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (quoting *Modine Mfg. Co. v. U.S. Int'l Trade Comm'n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)).

B. INDEFINITENESS

A patent claim is indefinite if, "viewed in light of the specification and prosecution history, [it fails to] inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). A claim may be indefinite if the patent does not convey with reasonable certainty how to measure a claimed feature. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). But "[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique." *Ethicon Endo–Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015).

II. CONSTRUCTION OF DISPUTED TERMS[1]

A. "Tomographic model" terms

1. "tomographically modeling/tomographic model(s)/tomographical model(s)"[2]

Plaintiff merging information from a plurality of tomographic scans of an object to produce a multidimensional representation of the subject/the multidimensional representation of the object obtained by merging a plurality of tomographic scans
Defendant the process for creating a digital image/a digital image that depicts quantitative differences in BMD of the object scanned and is created by the microprocessor in the controller using densitometry (as defined by Defendant) from at least one focal plane
Court merging information from multiple tomographic scans of an object to produce a representation of the subject/said representation depicting quantitative density differences of the object scanned, which is created by the microprocessor in the controller using densitometry from at least one focal plane

The Court must first address whether the tomographic scans are measured from "at least one focal plane." Defendant answers in the affirmative, citing as support a description of focal plane in the Webber reference (U.S. Patent No. 5,214,686, "'686 patent"). (*See* D.I. 31 at 6-7) (citing the '686 patent at 1:11-24) Plaintiff responds that Webber describes alternative perspectives for tomographic modeling, not all of which meet Defendant's proposed focal plane limitation. (D.I. 36 at 5-6) During oral argument, Defendant acknowledged that "at least one focal plane" does allow for circular scans. (*See* Tr. at 36) As the parties are now effectively in agreement, the Court will include "at least one focal plane" in its construction, as the phrase adds precision without modifying claim scope.

[1]The Court will also adopt the parties agreed-upon constructions.

[2]These terms appear in claims 1, 3, 6, 9, 12, 13, 15, 19, and 21 of the '374 patent as well as claim 1 of the '301 patent.

The next question is whether the tomographic model terms are based only on measurements using densitometric analyses, or whether other measurement methods may be used. Plaintiff points to the varied claim language -- referencing tomographical model and tomographical densitometry model -- as its chief evidence for the terms having different meanings. (*See* D.I. 33 at 7-9; Tr. at 57-58) Defendant rebuts this by arguing that the specification teaches a person of skill in the art ("POSA") that the present invention is directed solely toward densitometric analyses. To Defendant, the doctrine of claim differentiation has less weight here because the terms span across claims in different patents, while the '374 patent is internally consistent. (*Compare* '374 patent at claim 1, *with* '301 patent at claim 1; *see also* D.I. 31 at 8 (citing '374 patent at 1:25-27, 2:31-32, 2:51-53, 3:9-16, 3:42-47, 3:66-4:1); Tr. at 40) The Court agrees with Defendant: tomographical modeling is limited to densitometry. The specification unambiguously and repeatedly describes how "[t]he principle objects of the present invention include: providing a dental and orthopedic diagnostic application for densitometry" and "providing such an application which includes a method for modeling dental and orthopedic structure using densitometry." ('374 patent at 3:9-13) Plaintiff cites almost no intrinsic evidence for its position, relying instead in large part on an extrinsic dictionary definition. (*See* D.I. 33 at 7-8 (citing '374 patent at 2:8-15); D.I. 33-4)

Lastly, the parties dispute whether densitometry is limited to quantitative density analyses, as Defendant contends, or whether, as Plaintiff asserts, densitometry as described here relates generally to density and can be used to qualitatively compare scans (i.e., using color coding). (*See* D.I. 33 at 9-10 (citing '374 patent at 2:15-16, 2:25-26, 3:10-16, 4:48-52, 4:52-58; '301 patent at claim 20); Tr. at 50-51) Osseo contends that a POSA would understand that densitometric analyses can achieve color coded relativistic models, rather than just quantitative

(i.e., Bone Morphology Density ("BMD")) analyses. (*See* D.I. 36 at 2-3) (citing '374 patent at 9-10) Defendant counters that the specifications teach only quantitative analyses. (*See* D.I. 37 at 3-4 (citing '301 pat. at 5:16–23); Tr. at 33-34) Because the specifications unambiguously base all outputs on numerical measurements and calculations, Plaintiff's effort to expand the claim to include an "analog" output and grey-scale representations (Tr. at 50-54) is unavailing.

However, the Court disagrees with Defendant's insistence that the quantitative output is restricted to BMD. Although the specification repeatedly describes densitometric analyses using BMD, it does not unambiguously limit itself to this specific type of quantitative densitometric analysis. (*See id.* at 29) (defense counsel arguing density must be calculated while appearing to acknowledge it need not be limited to BMD)

2. "tomographic dental/orthopedic densitometry model"/"tomographical densitometry model"[3]

Plaintiff the multidimensional representation including density of the structure of the object, obtained by merging a plurality of tomographic scans
Defendant the process for creating a digital image/a digital image that depicts quantitative differences in BMD of the object scanned and is created by the microprocessor in the controller using densitometry (as defined by Defendant) from at least one focal plane
Court merging information from multiple tomographic scans of an object to produce a representation of the subject/said representation depicting quantitative density differences of the object scanned, which is created by the microprocessor in the controller using densitometry from at least one focal plane

The Court agrees with Defendant that "the intrinsic record is clear that densitometry is required for the claimed models and that the patentee uses 'tomographic model' consistently with 'tomographical densitometry model.'" (D.I. 31 at 9; *see also* Tr. at 40) The prosecution history also supports this construction, by distinguishing from the prior art based on the use of

[3]These terms appear in claims 1, 7, and 9 of the '301 patent.

densitometric analysis. (*See* D.I. 31 at 9) (citing D.I. 29-5 at 55) Any presumption of different meaning due to claim differentiation is overcome by the intrinsic evidence of inventor intent. The discussion above in Section A.1 also support the Court's construction.

B. "densitometry"[4]

Plaintiff relating to the density of the structure of the object of the tomographic scans
Defendant calculated bone morphology density (BMD) from detected and merged intensity values at dual energy levels
Court quantitatively calculated bone density

The first question is whether densitometry is used in a generalized dictionary manner or if the inventor intended a more specific bone density measurement. As Defendant notes, "[e]very discussion of the models of the present invention in the common specification involves densitometry." (D.I. 31 at 4) (citing '374 patent at 1:25-27, 2:31-32, 2:51-53, 3:9-16, 3:42-47, 3:66-4:1) In fact, the specification describes densitometry procedures relating to the measured value of bone density, and gives as an example "measuring bone morphology density (BMD) by utilizing scanning x-ray beam techniques." (*Id.*) (quoting '374 patent at 2:15-19, 2:31-32) Plaintiff purports to find a non-BMD application of densitometry in the color coding previously discussed. In the Court's view, densitometry is not limited to BMD, a point Defendant appears to concede. (*See* Tr. at 43) ("[W]hereas Osseo is saying, well. . . densitometry just merely has to relate to density, our construction, ***whether it is BMD or density information***, is that ***there must be a calculated density***.") (emphasis added) Consistent with what has already been stated, the

[4]This term appears in claims 1, 7, 8, and 9 of the '301 patent and claim 1 of the '262 patent.

Court concludes the patent limits densitometry to a quantitative form of bone density, but not to one particular type of calculation.

The second issue is whether densitometry is limited to dual energy measuring techniques. Defendant's limited evidence for such a conclusion consists mostly of a patent incorporated by reference, No. RE 36,162 to Bisek et al. ("Bisek"). (*See* D.I. 31 at 4 (citing D.I. 29-8 at 149 (1:38-48), 153 (9:38-47)); Tr. 30-31, 33) As Plaintiff points out, Bisek contains examples of energy measuring techniques beyond the dual energy system. (*See* D.I. 36 at 4 & n.1) In the Court's view, while the specification emphasizes dual energy methods, it does not limit the claims to those methods. (*See* '301 patent at 5:6–23 ("The Bisek et al. . . . discloses the use of dual-energy X-ray beams in medical densitometry applications. As discussed herein, ***dual-energy densitometry can result in a more accurate patient model***.") (emphasis added)); Tr. at 23-24 (pointing out that while Bisek describes dual energy imaging, other patents incorporated by reference describe single energy imaging))

C. "3D (digital) tomographic model(s)" / "three dimensional digital densitometry model"[5]

Plaintiff no construction necessary, three dimensional (digital) tomographic model(s) (as defined by Plaintiff)
Defendant a digital three-dimensional image that depicts quantitative differences in BMD of the object scanned and is created by the microprocessor in the controller using densitometry (as defined by Defendant) from two or more focal planes
Court No construction necessary

The parties agree that the model is digital (Tr. at 60-61) and also agree that a three dimensional (3D) model must be constructed from two or more focal planes (*id.* at 61-62). The

[5]These terms appear in claims 3, 9, 13, and 21 of the '374 patent and claim 1 of the '262 patent.

Court has already construed tomographic model. Therefore, no additional construction of these terms is necessary.

D. "conversion means"[6]

Plaintiff an analog-to-digital convertor or similar device which converts data from one format to another Alternatively: means-plus-function limitation Function: converting a signal from said detector array Structure: an analog-to-digital convertor or similar device which converts data from one format to another
Defendant means-plus-function limitation Function: converting a signal from the detector array Structure: an analog-to-digital convertor and a merger device
Court means-plus-function limitation Function: converting a signal from the detector array Structure: an analog-to-digital convertor

There is not sufficient structure to overcome the presumption of means-plus-function claiming. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) ("[T]he use of the word 'means' in a claim element creates a rebuttable presumption that § 112, para. 6 applies."). The parties essentially agree on the function. As for structure, Defendant's inclusion of a merger device is unwarranted. While the specification describes the presence of a merger device in the context of conversion, it does not make clear that this is part of the conversion process. (*See* D.I. 33 at 13; D.I. 37 at 9 (citing '301 patent at Fig. 1; 4:32–36)) The Court agrees with Plaintiff that the merger device does not have to be a part of the conversion means. (*See* Tr. at 101-02)

[6]This term appears in claim 1 of the '301 patent.

E. "a controller"[7]

Plaintiff one or more controllers, no construction necessary for the term controller
Defendant a microprocessor and a memory device where the microprocessor controls the positioning motor and controls storage of the claimed model(s)
Court one or more controllers, no construction necessary for the term controller

The parties dispute whether a single controller must oversee positioning of the motor and storage of the model or if there may be multiple controllers. The terms "a" and "said" are presumed to mean one or more. *See, e.g.*, *Braintree Laboratories, Inc. v. Novel Laboratories*, 749 F. 3d 1349, 1365 (Fed. Cir. 2014). The specification repeatedly references "a," "an," or "said" controller (*see* D.I. 31 at 11-12; Tr. at 87; '374 patent at Fig. 1, 4:24, 4:58–60), and Defendant concedes "[w]e need clear intent that they intended to limit it to the singular" (Tr. at 89). In the Court's view, such clarity is lacking.

At the hearing, Defendant asserted for the first time that in construing this term the Court should consider a "related EPO application that came off a PCT." (Tr. at 76-77) Specifically, Defendant argued that in representations made to a European Examiner, one can see a "clear intent by the same patentee to limit this to a single controller, not just a single controller but also a single microprocessor." (*Id.* at 77) In post-hearing briefing (D.I. 42, 43), Plaintiff argues that the "statements made before the European Patent Office ("EPO") in the EP Patent are irrelevant" because they "relate to claim limitations unique to the EP Patent and they address requirements under European patent law." (D.I. 42 at 1) Placing appropriate, non-dispositive weight on the European evidence, the Court continues to find insufficient indications of a clear intent to limit

[7]This term appears in claims 1, 6, 11, 12, 13, 15, 19, and 21 of the '374 patent and claim 1 of the '301 patent.

the U.S. patent's use of "a" to just a single controller. Even considering the European evidence, there remains a lack of support in the U.S. patent's specification for Defendant's construction, and there are different standards for examining European patents. *See Pfizer, Inc. v. Ranbaxy Laboratories Ltd.*, 457 F.3d 1284, 1290 (Fed. Cir. 2006); *Abbott Laboratories v. Sandoz, Inc.*, 566 F.3d 1282, 1290 (Fed. Cir. 2009); *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1312-13 (Fed. Cir 2014).

F. "merger device"[8]

Plaintiff a device that merges data output from a plurality of tomographic scans
Defendant a device that merges digitized signals from at least two x-ray scans into a data output suitable for processing and analyzing by a microprocessor
Court a device that merges digitized signals into a data output suitable for processing and analyzing by a microprocessor

Defendant's construction has more support in the specification (*see* D.I. 31 at 19) while Plaintiff's seems largely derived just from Figure 2 (*see* D.I. 33 at 15). Other aspects of the parties' differences have been resolved in connection with other terms.

G. "means for storing a preexisting tomographical dental/orthopedic densitometry model"[9]

Plaintiff means-plus-function limitation <u>Function</u>: storing a pre-existing tomographical dental/orthopedic densitometry model <u>Structure</u>: computer memory
Defendant means-plus-function limitation <u>Function</u>: storing a pre-existing tomographical dental/orthopedic densitometry model <u>Structure</u>: a program in the controller to store pre-existing tomographical dental/orthopedic densitometry models in computer memory

[8]This term appears in claim 4 of the '301 patent.
[9]These terms appear in claim 1 of the '301 patent.

Court
means-plus-function limitation Function: storing a pre-existing tomographical dental/orthopedic densitometry model Structure: computer memory

Plaintiff points to relevant portions of the patent teaching the use of computer memory, which inherently includes "some code" but not necessarily a "special program." (D.I. 33 at 16; Tr. at 108-109, 111) While computer memory is not the only possible means of storing information (*see* D.I. 31 at 13), it is the taught method.

H. "an output device connected to said microprocessor and adapted for receiving a tomographic model/tomographical densitometry model from said microprocessor"[10]

Plaintiff
one or more output devices; no construction necessary for the term "a controller" or any other terms except as otherwise defined by Plaintiff
Defendant
output device connected to the microprocessor that sends the tomographic model/ tomographic densitometry model to the output device and is the same said microprocessor that: (i) is connected to the memory device, input device, positioning motor, and convertor; and (ii) is programmed to send commands to the positioning motor
Court
one or more output devices connected to said microprocessor and adapted for receiving a tomographic model/tomographical densitometry model from said microprocessor

Defendant conceded at the hearing that the only material issue is one of plural versus singular (Tr. at 83), which the Court has now resolved in Plaintiff's favor. Plaintiff is correct that, similar to the controller, the specification discloses it would be possible to connect the multiple output devices, and Defendant fails to overcome the presumption of plurality. (*See* D.I. 33 at 17) The European Patent evidence helps Defendant no more here than it did with the earlier term.

[10]These terms appear in claim 1 of the '301 patent.

I. "comparing" terms

1. "said controller being adapted for creating, storing, and comparing 3D digital tomographic models of an object . . ."[11]

2. "wherein said controller is adapted to compare a pre-existing tomographic model with a current tomographic model"[12]

3. "said computer creating, storing and comparing three-dimensional densitometry models . . . [densitometry comparison information being communicated by an output device]"[13]

Plaintiff no construction necessary for the terms except as otherwise defined by Plaintiff and except that "said computer" means one or more computers
Defendant the controller/computer must be capable of creating, storing, and comparing claimed models and with respect to comparing, comparing quantitative data used to create each of the claimed models
Court no construction necessary

The only issue is Defendant's request to insert a quantitative element. (*See* Tr. at 92-93, 96-98) This quantitative element is already embodied in the Court's construction of "tomographic model" and "densitometry model."

J. "means for comparing said pre-existing tomographical densitometry model to a current tomographical densitometry model"[14]

Plaintiff means-plus-function limitation <u>Function</u>: comparing said pre-existing tomographical densitometry model to a current tomographical densitometry model

[11]This term appears in claims 13 and 21 of the '374 patent.

[12]This term appears in claims 15 and 19 of the '374 patent.

[13]This term appears in claim 1 of the '262 patent.

[14]This term appears in claim 9 of the '301 patent.

Structure: a microprocessor configured to obtain a first tomographical model created during a first session and a second created during a second session later than the first session, and to display differences between the first and second tomographic models
Defendant indefinite means-plus-function limitation *Alternatively*: Function: comparing said pre-existing tomographical densitometry model to a current tomographical densitometry model Structure: the microprocessor of claim 1 programmed to compare pre-existing diagnostic parameters to the merged, digitized detector array output of the currently completed first/second energy band scanning procedure
Court Indefinite means-plus-function limitation

The Court agrees with the parties that this is a means-plus-function term. Defendants are correct that the patent fails to disclose how to implement the comparison function in order to compare models. (*See* D.I. 31 at 17) ("However, there is no disclosure in the '301 patent for structure, materials, or acts in the controller sufficient to perform the claimed function of 'comparing said pre-existing tomographical densitometry ***model*** to a current tomographical densitometry ***model***.'") Plaintiff points to the patent's discussion of this comparison (*see* D.I. 33 at 19) (citing '301 patent at 2:13-36, 2:41-45, 4:43-55, 4:59-5:25, 5:18-21, Figs. 1-2), but these references only note the existence of the comparison; they do not disclose the structure by which it occurs.

At the hearing, Plaintiff explained that a POSA, with skills in imaging and computer science or electrical engineering, would be able to implement a generic data comparison, and there is "[n]o special comparison that requires an expertise in densitometry to figure out." (Tr. at 94-95) (citing '301 patent at 5:6-21) However, as Defendant responded, the clearest guidance the specification provides on how to compare scans is where it reads "compare diagnostic parameters," which the Court agrees is insufficient. (*Id.* at 96-97) Because the patent requires quantitatively measuring density, some form of algorithmic comparison is also required, but it is

missing. (*See id.* at 100) (Defense Counsel: "[Osseo] stood up here and told [the Court] that 'comparing' was the heart of their invention and now they're expecting everybody to say one of ordinary skill in the art would understand how to do it.") The Court is persuaded by clear and convincing evidence that a POSA would not know with reasonable certainty what the required structure is to perform the comparing functions. *See Teva*, 789 F.3d at 1345.

III. CONCLUSION

The Court will construe the disputed terms as explained above. An appropriate Order follows.