

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

GLOBUS MEDICAL, INC.,

Plaintiff,

v.

DEPUY SYNTHES PRODUCTS, LLC.,  
AND DEPUY SYNTHES SALES, INC.,

Defendants.

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Civil Action No. 13-854-LPS

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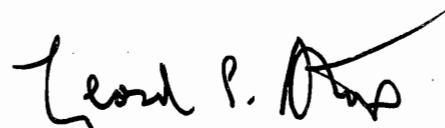
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**MEMORANDUM OPINION**

August 14, 2015  
Wilmington, Delaware

  
STARK, U.S. District Judge:

Plaintiff Globus Medical, Inc. (“Globus” or “Plaintiff”) filed a patent infringement action against Defendants DePuy Synthes Products, LLC and DePuy Synthes Sales, Inc. (collectively, “Synthes” or “Defendants”). (D.I. 1) Globus asserts U.S. Patent No. 8,328,872<sup>1</sup> (“the ’872 patent”) and U.S. Patent No. 8,641,768<sup>2</sup> (“the ’768 patent”) (collectively, the “patents-in-suit”) against Defendants. (D.I. 26) The parties appear to agree that the patents are quite similar and that the Court’s claim constructions should apply equally to both patents. (D.I. 46 at 1)

Pending before the Court is the issue of claim construction of various disputed terms of the patents-in-suit. The parties completed briefing on claim construction on November 4, 2014. (D.I. 45, 46, 53, 54) In addition to the briefing, the parties submitted technology tutorials. (D.I. 43, 44). The Court held a Markman hearing on December 22, 2014. (*See* D.I. 69) (“Tr.”) In compliance with the Court’s request, the parties also submitted a joint letter following the hearing addressing modified constructions the Court had proposed for certain of the disputed terms. (D.I. 63) Thereafter, the Court found it necessary to order still more supplemental briefing, in response to four specific questions, which the parties answered on February 3 and 6, 2015. (*See* D.I. 76, 77, 78, 79, 80)

## **I. LEGAL STANDARDS**

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.*

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<sup>1</sup> The ’872 patent is entitled “Intervertebral Fusion Implant.” It was issued on December 11, 2012. (D.I. 26, Ex. A)

<sup>2</sup> The ’768 patent is entitled “Intervertebral Fusion Implant.” It was issued on February 4, 2014. (D.I. 26, Ex. B)

*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) (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.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted), *aff’d*, 481 F.3d 1371 (Fed. Cir. 2007).

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 PTO [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)).

## II. CONSTRUCTION OF DISPUTED TERMS

### A. “locking mechanism”

<b>Globus</b> Plain and ordinary meaning and does not require further construction. <sup>3</sup>  If construction is necessary, “a mechanism for retaining a bone screw within a screw hole.”
<b>Synthes</b> “a mechanism that eliminates movement of at least one screw by linking firmly to the at least one screw”
<b>Court</b> “a mechanism for securing a bone screw within a screw hole when in the locked position”

This term appears in claim 1 of both patents-in-suit, modified by a functional limitation, “for preventing the back out of at least one screw from the at least one hole.” (See D.I. 39, Ex. B at 6:13-15; D.I. 39, Ex. C at 6:21-23) The parties disagree about the extent to which the “locking mechanism” holds the bone screws firmly in place. (See Tr. at 9:23-10:1) (Globus stating: “So the dispute here is whether the intrinsic record requires that the locking mechanism eliminate all movement of the screw and do that by linking firmly to the screw.”)<sup>4</sup>

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<sup>3</sup>Throughout this Opinion, unless the Court indicates that “no construction is necessary,” the Court has determined that the parties have raised an actual dispute regarding the proper scope of the claims, which the Court must resolve by claim construction. See *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008).

<sup>4</sup>The “locking mechanism” stands in contrast to the “screw blocking mechanism capable of preventing at least one of the first and second screws from disengaging” found in claim 11 of both patents-in-suit as well as in claim 15 of the ’768 patent. (See D.I. 39, Ex. B at 7:12-8:3; D.I. 39, Ex. C at 7:19-23, 8:12-16)

Synthes argues that Globus's cancellation of all of its original claims and addition of new claims including the term "locking mechanism" in both patents-in-suit dictates a narrower meaning for this term than "a screw back out prevention mechanism," the term that appeared in the original claims. To overcome an obviousness rejection to the '872 patent based in part on a prior art reference that disclosed "a screw back out prevention mechanism," Globus submitted new claims that required, *inter alia*, a "locking mechanism." (See D.I. 39, Ex. D at 17-18, 39) However, because several new limitations were part of these amendments, it does not necessarily follow that "locking mechanism" was added to overcome the obviousness rejection. (See *id.* at 43-44) Indeed, Globus' explanation to the PTO as to why the amended claims were patentable did not even address the "locking mechanism" portion of the amendments. (See *id.*) Rather, Globus stated to the Examiner that "reviewers of this . . . prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present application." (See *id.* at 44) On this record, there is no clear and unmistakable disavowal of locking mechanisms that do not fully "eliminate movement of at least one screw." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d at 1325-26 ("[F]or prosecution disclaimer to attach . . . the alleged disavowing actions or statements made during prosecution [must] be both clear and unmistakable.").

Synthes next argues that "locking mechanism" must have a different meaning than the "blocking mechanism" used in other claims, which would present a problem for Globus' proposed construction, as Globus' proposal seems to amount to a "blocking mechanism" (i.e., "a mechanism for retaining a bone screw within a screw hole"). There is a "general presumption that different terms have different meanings." *Chi. Bd. Options Exch., Inc. v. Int'l Sec. Exch.*,

*LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012). The plain and ordinary meaning of “lock” is to “make secure with or as if with a lock” (D.I. 45, Ex. B at 2); the plain and ordinary meaning of “block” is “to stop or impede passage of or movement through; obstructing” (*see* D.I. 45, Ex. F at 2). The terms differ in both the manner and degree to which they connote immobilization. Consistent with the preferred embodiments in the specification, “lock” – unlike “block” – connotes the use of a mechanism capable of being engaged or disengaged. (*See* D.I. 39, Ex. B at 4:45-48, 4:55-57, 5:3-5; D.I. 39, Ex. C at 4:53-56, 4:63-65; *see also* Tr. at 12:8-11) This more restrictive meaning of “lock” is consistent with the narrower function the “locking mechanism” performs – which is “preventing the back out of at least one screw from the at least one hole” (*see* D.I. 39, Ex. B at 6:13-15; D.I. 39, Ex. C at 6:21-23) – as compared to the broader function performed by the “blocking mechanism” – which merely requires that the mechanism keep the screw from “disengaging,” or entirely falling out of, the screw hole (*see* D.I. 39, Ex. B at 8:1-3; D.I. 39, Ex. C at 7:21-23, 8:14-16).

Nothing in the claim language nor the specification contemplates that the “locking mechanism” limits any kind of movement other than backwards movement. It follows that the claimed “locking mechanism” need not eliminate all movement of at least one screw.

Putting all of this together, the Court is not persuaded that either side’s proposed construction is correct. Instead, the Court construes “locking mechanism” as “a mechanism for securing a bone screw within a screw hole when in the locked position.”

**B. “preventing the back out of at least one screw from the at least one hole”**

<b>Globus</b> Plain and ordinary meaning and does not require further construction.  If construction is necessary, “keeping at least one bone screw from moving out of at least one screw hole in the direction opposite the direction of insertion.”
<b>Synthes</b> “eliminating movement of at least one screw in the direction of the anterior surface of the plate”
<b>Court</b> “preventing the most recessed portion of the screw from backing out beyond the locking mechanism”

This term is used in claim 1 of both patents-in-suit to define the function of the “locking mechanism.” (See D.I. 39, Ex. B at 6:13-15; D.I. 39, Ex. C at 6:21-23) The parties appear to agree on the meaning of the directional limitation of “from the at least one hole,” but their views then diverge, just as they did with respect to the construction of “locking mechanism.”

As explained above, the Court has found Globus’ construction of “locking mechanism” overly broad, while Synthes’ construction of that term has been rejected as too narrow. While the Court agrees with Synthes that a construction of “locking mechanism” that allows for *backwards* movement of the screw would render the “preventing the back out . . .” term now under consideration indistinguishable from the functional limitation of the “blocking mechanism” (D.I. 39, Ex. B at 8:1-3; D.I. 39, Ex. C at 7:21-23, 8:14-16), Synthes points to nothing in the intrinsic record that supports its position that “preventing the back out” requires “eliminating movement” in all directions.

As was discussed at the hearing, a preferred embodiment depicts screws inserted at variable angles such that the least-recessed parts of their heads remain beyond the locking

mechanism even without any backwards movement. (*See* Tr. at 39:19-41:11, 43:1-46:5, 49:1-17; *see also* D.I. 39, Ex. B at Figs. 9-12; D.I. 39, Ex. C at Figs. 9-12) Globus pointed out that in this preferred embodiment, “the locking mechanism is engaged so that that portion of the screw head that is recessed further into the passageway is blocked from moving out and from backing out of the passageway.” (Tr. at 45:18-21) Consequently, the Court asked the parties to address whether the present term could be construed as “prevent[ing] the most recessed portion of the screw from backing out beyond the locking mechanism when in a locked position.” (*Id.* at 49:19-21) Globus agreed to this construction. (*See id.* at 50:6-9; D.I. 63 at 1) While Synthes did not agree to it (*see* Tr. at 49:22-25; D.I. 63 at 2), Synthes conceded that it “certainly addresses the inconsistency between Globus’ position and the only preferred embodiment.” (Tr. at 49:25-50:2)

The Court has determined that its proposal is an appropriate construction and adopts it.

**C. “extension(s)”**

<p><b>Globus</b>  Plain and ordinary meaning and does not require further construction.    If construction is necessary, “a part that is included on the plate that enlarges the plate.”</p>
<p><b>Synthes</b>  “a structure extending away from the top or bottom surface of the plate that embeds into the adjacent vertebral body”</p>
<p><b>Court</b>  “outer layer(s) that vertically extend(s) the plate”</p>

The parties agree that, at most, the only parts of the specification that could be read as describing this term are limited to “knife like edges . . . which are designed to engage the vertebral body and provide[] additional torsional stability to that of the bone screws” and “‘eye brow’ like structure which fully captures the bone screws . . . while still allowing for the screws

to reside about the tooth root plane and remaining lower than the tooth.” (See D.I. 39, Ex. B at 4:58-64; D.I. 39, Ex. C at 4:66-5:5) Synthes, however, contends that the latter disclosure does not refer to extensions, and that nothing in the patent suggests that eye brow-like structures are extensions. According to Synthes, “extensions” are limited to knife-like edges that can “embed into the adjacent vertebral body.”

Synthes argues that the prosecution history of the '872 patent demonstrates that this term must be construed to exclude eye brow-like structures – and therefore cover only knife-like edges. Specifically, during prosecution Globus told the PTO that the Lechmann prior art patent, which appears to have eye brow-like structures and flat ridges, did not have extensions. However, Globus did not state that Lechmann did not have *any* extensions; rather, Globus stated only that Lechmann did not “teach or suggest a first and second extension located on the upper and lower surface of the plate.” (See D.I. 39, Ex. D at 29) This was in accord with the Examiner’s own conclusion that “Lechmann fails to disclose the plate having a first extension on a superior surface and a second extension on an inferior surface.” (See *id.* at 18) While the Lechmann figures do appear to show eye brow-like structures and ridges, they do not clearly and unambiguously extend from the upper and lower sides of the plate. Rather, the eye brows appear to protrude from the anterior surface of the plate, and the ridges, as Globus contends, are arguably the upper and lower surfaces of the plate themselves.

Synthes makes a similar argument regarding Globus’s statements about the Bray prior art patent, but this, too, is unavailing. Globus told the Examiner that Bray failed to disclose the first and second extensions as they appear in final version of the claims, but it never stated that Bray lacked *any* extensions at all. (See D.I. 39, Ex. D at 43-44) Thus, Synthes has failed to identify in

the prosecution history a clear and unmistakable disclaimer of eyebrow-like structures as extensions.

Synthes also argues that Globus elected, as part of the prosecution of the '768 patent, to direct its claims to a species which is depicted in the preferred embodiment as having knife-like edges. (*See* D.I. 45, Ex. H at 2) However, any such election did not apply to the '872 patent. Moreover, there is no clear indication that Globus intended to limit the term “extension” to the knife-like edges that appear in the preferred embodiment as one of *several* features distinguishing it from other embodiments.

Although the preferred embodiment in Figures 9 and 10 of the '872 patent has the originally claimed knife-like edges, construing “extension” as having to embed into the adjacent vertebrae would “improper[ly] . . . read limitations from a preferred embodiment described in the specification – even if it is the only embodiment – into the claims [without] a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *See Epos Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1341 (Fed. Cir. 2014).

Synthes further contends that the extensions must be “structure[s] extending away from the top or bottom surface of the plate,” because if they extended away from the anterior surface, they would not be “zero-profile” or “designed to be conformable to the spinal anatomy, so as to be generally less intrusive to surrounding tissue and vasculature than existing rigid stabilization systems,” as described in the specification. (*See* D.I. 39, Ex. B at 2:59-62; D.I. 39, Ex. C at 2:67-3:2) Globus disagrees that the invention could not fulfill this purpose if the extensions were permitted to extend toward the anterior surface. Globus further argues that the “extensions” cannot be separate structures because the claim language itself says that the upper and lower

surfaces of the plate “comprise[,],” and therefore include, the extensions. (*See* D.I. 39, Ex. B at 6:19-22; D.I. 39, Ex. C at 6:27-30)

The Court has concluded that the claim language makes clear that the extensions are components of the plate; while a certain degree of protrusion beyond the anterior surface would probably defeat the purpose of the invention, being “generally less intrusive” does not require the extensions to be completely non-intrusive. After the hearing, Globus agreed to the Court’s alternative construction – “outer layer(s) that vertically extend(s) the plate” (D.I. 63 at 2-4) – and the Court now adopts this as its construction.

**D. “generally flush”**

<b>Globus</b> Plain and ordinary meaning and does not require further construction.  If construction is necessary, “generally level with.”
<b>Synthes</b> “level with the anterior surface of the plate such that the extension fits at least partially inside the anterior-posterior intervertebral space”
<b>Court</b> “generally level with”

This term provides a structural limitation to the “extensions” in claim 1 of both patents-in-suit. (*See* D.I. 39, Ex. B at 6:20-24; D.I. 39, Ex. C at 6:28-32) The parties appear to agree that “flush” means “level with,” but they disagree about whether or not a positional requirement in relation to the anterior-posterior intervertebral space should be read into the word “generally.” (*See* Tr. at 79:16-22) Synthes contends that the extension must be “at least partially inside the anterior-posterior intervertebral space” in order for the implant to be “implant[ed] in an intervertebral space” and, therefore, be “zero-profile,” as described in the specification. (*See* D.I.

39, Ex. B at 4:34-36; D.I. 39, Ex. C at 4:42-44)

Neither the claims nor the specification suggests that the full implant can be entirely **outside** of the anterior-posterior intervertebral space. But it does not necessarily follow that the extensions – which are merely one part of the plate, which in turn is one part of the implant – must also be at least somewhat in this space. The claim language does not exclude extensions located on parts of the upper and lower surfaces of the plate that are outside of the intervertebral space. (See Tr. at 80:10-13, 85:6-13)

Accordingly, the Court adopts Globus' proposed construction.

**E. “define a through hole, the through hole extending through the spacer”**

<b>Globus</b> “delineate the boundary of an opening from one surface of the spacer to the other”
<b>Synthes</b> “delineate the boundaries of a hollow space enclosed by the spacer that passes from said inferior surface to said superior surface of the spacer”
<b>Court</b> “delineate the boundaries of a hollow space enclosed by the spacer that passes from said inferior surface to said superior surface of the spacer”

This term appears in claim 2 of both patents-in-suit. (See D.I. 39, Ex. B at 6:27-29; D.I. 39, Ex. C at 6:35-37) The parties dispute whether the opening in the implant must be completely enclosed by the spacer. Synthes contends it must, and the Court agrees.

The figures depicting the preferred embodiment show the recess as an open hole and the through hole as an enclosed hole (see D.I. 39, Ex. B at Figs. 9-12; D.I. 39, Ex. C at Figs. 9-12), and the specification states that only “the **spacer** portion 33 provides an axial shaped hole” (see D.I. 39, Ex. B at 5:24-25 (emphasis added); see also D.I. 39, Ex. C at 5:33-34). Further, as Synthes argues, the plain and ordinary meaning of “define” as “to fix or mark the limits of” (see

D.I. 45, Ex. Q at 1), and “hole” as “a hollow place in a solid body or surface” (*see* D.I. 45, Ex. R at 3), support a construction requiring the entire through hole to be delineated by the boundaries of the spacer.

By contrast, Globus’ proposed construction would incorrectly allow that “any little indentation in the spacer could be a through hole.” (Tr. at 111:24-25)

Accordingly, the Court adopts Synthes’ proposed construction of this term.

**F. “to engage the adjacent vertebrae”**

<b>Globus</b> “to make contact with the adjacent vertebrae”
<b>Defendants</b> “to grip the adjacent vertebrae”
<b>Court</b> “to make connective contact with the adjacent vertebrae”

This term is used in claim 7 in relation to the extensions of that claim, which are “configured and dimensioned to engage the adjacent vertebrae,” “for providing torsional stability.” (*See* D.I. 39, Ex. B at 6:62-64; D.I. 39, Ex. C at 6:67-7:2) The parties’ disagreement is centered on the meaning of the word “engage.”

As an initial matter, the plain and ordinary meaning of “engage” in this context is “to come into contact or interlock with: mesh.” (*See* D.I. 46, Ex. 1 at 751) Globus argues that “contact” is used in the specification to refer to “engage.” (*See* D.I. 39, Ex. B at 2:9-12, 3:43-35) Globus further points to the prosecution history, in which the Examiner found that the Bray reference discloses extensions that “engage” the adjacent vertebrae because they “contact a surface of the bone bodies.” (*See* D.I. 54, Ex. 6 at ¶ 44) However, as Synthes contends, the use of “engaging” and “contacting” in different claims to describe different capabilities of surface

contact areas (*compare* D.I. 39, Ex. B at 6:5-8 *with id.* at 6:48-51) suggests that the two terms have distinct meanings, *see Chi. Bd. Options Exch.*, 677 F.3d at 1369. The capability of the contact area in claim 1 to either engage (*see* D.I. 39, Ex. B at 6:7-8; D.I. 39, Ex. C at 6:16-17) *or* contact (*see* D.I. 39, Ex. B at 6:48-49; D.I. 39, Ex. C at 6:54-55) the adjacent vertebrae suggests that “contact” is used as a broader term than “engage.”

Synthes emphasizes that “grip” is used in the specification to refer to “engage” (*see* D.I. 39, Ex. B at 3:47-50; D.I. 39, Ex. C at 3:56-58), but this is in the context of a separate limitation regarding the protrusions on the spacer (rather than the extensions on the plate) (*see* D.I. 39, Ex. B at 6:16-18; D.I. 39, Ex. C at 6:24-26). The specification’s use of the word “grip” indicates that “engage” must have a meaning that includes “grip,” but not that “engage” and “grip” are coextensive.

As Synthes argued at the hearing, replacing “engage” with “contact” would render the limitation “superfluous because any structure residing on top of the plate would engage the vertebrae merely because of where it’s located. . . . There would be no need to configure and dimension it in any particular way at all in order to engage if all it had to do was contact.” (Tr. at 93:21-23) “Engage,” then, must connote more than “contact.”

To define this range between “more than contacting” and “including but not limited to gripping,” the Court asked the parties at the hearing if “connect” might be an appropriate alternative. The parties appeared to agree that “connect” implies “something more than contact.” (*See* Tr. at 96:25-97:1; *see also id.* at 98:17-21 (Globus opposing “connect” because “it could connote more or less than grip,” but adding “maybe we’re in agreement”)) The Court will use in its construction “connective contact,” to indicate that what is required is something more than

bare contact but not necessarily anything more than gripping.

Accordingly, the Court construes “to engage the adjacent vertebrae” as “to make connective contact with the adjacent vertebrae.”

**G. “for providing torsional stability”**

<b>Globus</b> “for resisting rotational movement”
<b>Synthes</b> “for preventing rotational movement” <sup>5</sup>
<b>Court</b> “for resisting rotational movement”

This term further describes a function being performed by the extensions of claim 7 in both patents-in-suit. (See D.I. 39, Ex. B at 6:63-64; D.I. 39, Ex. C at 7:1-2) These are the same extensions that are “configured and dimensioned to engage the adjacent vertebrae.” (See D.I. 39, Ex. B at 6:62-63; D.I. 39, Ex. C at 6:67-7:1) While the parties appear to agree that “torsional” refers to “rotational movement,” the parties disagree as to the meaning of the term “stability.”

Globus contends that “stability” only requires *resistance* of movement. Globus observes that the specification states that the knife-like edges provide “*additional* torsional stability to that of the bone screws” (see D.I. 39 Ex. B at 4:58-60 (emphasis added); see also D.I. 39, Ex. C at 4:66-5:1), thereby implying that the extensions do not provide complete torsional stability. Synthes responds with the analogy that a deadbolt lock can provide additional security to a lock on a doorknob even though the lock on the doorknob already fully prevents the door from

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<sup>5</sup>In its briefing, Synthes also contends that this term is indefinite. Putting aside whether Synthes’ contention was timely disclosed, the Court finds that the term is not indefinite, as a person having ordinary skill in the art would understand the scope of the claim with reasonable certainty. See *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014).

opening. (*See* Tr. at 107:17-108:24) This analogy would seem to be inapt as one might add a deadbolt to a door to have a back-up, alternative securing mechanism should the doorknob lock fail. In the context of the claims at issue here, however, the extensions are not merely a backup – providing torsional merely when the bone screws themselves somehow fail. Indeed, there is no disclosure of plate extensions that could provide any torsional stability at all in the absence of bone screws. Rather, the extensions enhance the torsional stability provided primarily by the bone screws.

Accordingly, the Court adopts Globus’ proposed construction of this term.

**H. “recess”**

<b>Globus</b> Plain and ordinary meaning and does not require further construction.
<b>Synthes</b> “a depression or cleft in the spacer”
<b>Court</b> “a depression or cleft”

This term appears in claims 1 and 7 of the ’768 patent, which recite “wherein the spacer includes at least one recess that is generally aligned with the at least one hole of the plate.” (*See* D.I. 39, Ex. C at 6:33-34, 7:6-7) The claim language, which positions the “recess” in general alignment with the screw hole, together with the specification, which shows an open circle on the anterior surface of the spacer (*see* D.I. 39, Ex. C at Fig. 12), indicate that the “recess” must be configured as a depression or cleft. It is unnecessary to add to the construction that the recess is located on the spacer, given that the claim language already clearly indicates that the recess is included in the spacer. (*See* D.I. 39 Ex. C at 6:33-34) Thus, the Court will adopts Synthes’

proposed construction,<sup>6</sup> but without redundantly including “in the spacer.”

**I. “spaced from”**

<b>Globus</b> Plain and ordinary meaning and does not require further construction.  If construction is necessary, “having some distance between.”
<b>Synthes</b> Indefinite
<b>Court</b> “positioned at some distance from”

This term is found in claim 12 of the '768 patent. (*See* D.I. 39, Ex. C At 7:24-26) The Court is unpersuaded by Synthes' contention that the term is indefinite. In the physically narrow context in which the claimed (physically small) implants are used, one of ordinary skill in the art would be reasonably certain of the narrow, small scale in which “spaced from” must be evaluated. Further, the record lacks any evidence to show that one of ordinary skill in the art would be unable to discern the meaning of this claim term as it is used in the patents-in-suit.

The Court agrees with Globus that, as used in the relevant context, the plain and ordinary meaning of “spaced” is “having some distance between.” (*See* D.I. 47, Ex. 1 at 2180) However, the intrinsic evidence does not support requiring that the extensions are placed “between” the first and second screw holes; they need only be “at some distance from” them. Accordingly, the Court construes “spaced from” as “positioned at some distance from.”

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<sup>6</sup>At one time, this also appears to have been Globus' proposed construction. (*See* D.I. 39, Ex. A at 9)

**J. “located proximate”**

<b>Globus</b> Plain and ordinary meaning and does not require further construction.  If construction is necessary, “located close to”
<b>Synthes</b> Indefinite
<b>Court</b> “located closer to”

This term appears in claims 17 and 18 of the '768 patent and describes the position of screw holes in relation to the two lateral ends and the upper and lower surfaces, respectively, of the plate. (*See* D.I. 39, Ex. C at 8:20-26) For example, claim 17 recites:

The implant of claim 14, wherein the first screw hole is located proximate a first lateral end of the anterior surface of the plate and the second screw hole is located proximate a second lateral end of the anterior surface of the plate.

(*Id.* at 8:20-23) Similarly, claim 18 requires that one screw hole be proximate to the lower surface, and that the other be proximate to the upper surface. (*Id.* at 8:24-26)

Globus contends that the plain and ordinary meaning of “proximate” is “close to.” (D.I. 46 at 19) (citing D.I. 46, Ex.1 at 1828) Synthes contends that the term is indefinite. (D.I. 45 at 20) According to Synthes, there is no intrinsic evidence indicating how close the structures must be, leaving a person of ordinary skill in the art without “any objective boundaries of the scope of that claim term.” (*See* Tr. at 118:16-19) In the context of the patents-in-suit, the term “proximate” is not used to indicate a precise distance, but rather, a relative position of the screw holes and the various plate surfaces. Accordingly, the Court construes “proximate to” as “located closer to,” which Globus agreed to at the Markman hearing. (*See* Tr. at 122:20-123:4) As

Globus further explained in the post-hearing submission, this construction “require[s] each of the screw holes to be ‘located closer to’ their respective *claimed* surfaces than the distance in which these screw holes are located from the *opposing surfaces recited* in each claim.” (D.I. 63 at 6) (emphases in original)

#### **IV. CONCLUSION**

The Court will construe the disputed claim terms of the patents-in-suit consistent with this Memorandum Opinion. An appropriate Order follows.