United States District Court,
W.D. Tennessee, Western Division.

SPINE SOLUTIONS, INC. a Delaware corporation,
Plaintiff.
v.
MEDTRONIC SOFAMOR DANEK, INC., an Indiana corporation; Medtronic Sofamor Danek USA, Inc., a Tennessee corporation,
Defendant.

No. 07-2175 JPM-dkv

July 2, 2008.

Albert C. Harvey, Kyle M. Wiggins, Thomason, Hendrix, Harvey, Johnson & Mitchell, Memphis, TN, Daniel E. Gustafson, Karla M. Gluek, Gustafson, Gluek, PLLC, Minneapolis, MN, Jeffrey M. Olson, Matthew S. Jorgenson, Paul H. Meier, Samuel N. Tiu, Sidley, Austin, LLP, Los Angeles, CA, for Plaintiff.

Cyrus A. Morton, Jan M. Conlin, Marta M. Chou, Sharon Elizabeth Roberg-Perez, Munir R. Meghjee, Robert L. Schug, Robins, Kaplan, Miller & Ciresi, LLP, Minneapolis, MN, Dirk D. Thomas, Robert A. Auchter, Dewey & Leboeuf, LLP, Washington, DC, Grady M. Garrison, John R. Branson, Baker, Donelson, Bearman, Caldwell & Berkowitz, P.C., Memphis, TN, for Defendant.

ORDER FOLLOWING MARKMAN HEARING

JON PHIPPS McCALLA**, District Judge.**

Before the Court is the parties' request for claim construction pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Medtronic Sofamor Danek, Inc. and Medtronic Sofamor Danek USA, Inc. (collectively, "Medtronic") filed an Opening Markman Brief on February 19, 2008 (Doc. 113). Spine Solutions, Inc. ("SSI") filed an Opening Markman Brief on February 19, 2008 (Doc. 115). Medtronic and SSI filed responsive Markman briefs on March 17, 2008 (Docs. 142 and 143, respectively). Medtronic and SSI filed reply Markman briefs on March 31, 2008 (Docs. 159 and 160, respectively). SSI filed a surreply to Medtronic's reply Markman brief on April 9, 2008 (Doc. 175), and Medtronic filed a response to that surreply on April 16, 2008 (Doc. 185). The Court held a hearing on May 2, 2008, during which both parties had an opportunity to present their positions. For the reasons stated herein, the Court construes the claim terms as follows.

I. Background

On August 30, 2005, the Patent and Trademark Office ("PTO") issued U.S. Patent No. 6,936,071 (filed July 2, 1999) ("'071 Patent") to inventors Thierry Marnay and Boris Beyersdorff, who assigned the patent to

Plaintiff SSI. The '071 Patent is entitled "Intervertebral Implant." The invention teaches an intervertebral implant with an upper part and lower part each having support faces for vertebrae, with each part having protrusions and recesses that are offset laterally so that the parts can mesh with one another to minimize the structural height of the implant. '071 Patent col.1.

SSI brings this action asserting that Defendant Medtronic infringed the ' 071 Patent. (Compl. para. 10 (Doc. 1).) Before the Court can consider SSI's allegations of infringement, it is required to construe the scope of the ' 071 Patent.

II. Standard of Review

Construction of a patent and the terms contained therein is the first step in a "two-step analysis" of infringement. Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc., 214 F.3d 1302, 1306 (Fed.Cir.2000); Markman, 52 F.3d at 976 ("The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing." (citations omitted)). Claim construction is determined by the Court, as a matter of law. Markman, 52 F.3d at 976.

In construing claims, a court should first consider the intrinsic evidence of record, consisting of the language of the patent claims, the patent specification, and the prosecution history. Insituform Techs., Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1105 (Fed.Cir.1996); Markman, 52 F.3d at 979. However, "the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to 'particularly point[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention.' " Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1331 (Fed.Cir.2001)(quoting 35 U.S.C. s. 112, para. 2); *see also* Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed.Cir.2005)("the claims themselves provide substantial guidance as to the meaning of particular claim terms"). "[A] construing court does not accord the specification, prosecution history, and other relevant evidence the same weight as the claims themselves, but consults these sources to give the necessary context to the claim language." Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1552 (Fed.Cir.1997)(*overruled on other grounds by* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed.Cir.1998)). Thus, a court should construe claim terms as having the meaning ascribed to them by one of ordinary skill in the art unless the patent specification or prosecution history indicates a contrary meaning. Phillips, 415 F.3d at 1313; *see also N*. Telecom Ltd. v. Samsung Elecs. Co., 215 F.3d 1281, 1287 (Fed.Cir.2000).

In determining the meaning to be given claim terms, the Court must read the terms in the context of the specification because it is the patent specification which, by statute, must contain a "full, clear, concise, and exact" description of the invention. 35 U.S.C. s. 112, para. 1; Phillips, 415 F.3d at 1311. FN1 Thus, claim terms must be construed so as to be consistent with the specification. Id. at 1315, 1316 ("The 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." (*quoting* Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed.Cir.1998))). The specification may use a claim term in a way that differs from its ordinary meaning; in such instances, the patentee is deemed to have acted as his own lexicographer, and the ordinary meaning of the language must be rejected. Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1204 (Fed.Cir.2002). However, "the written description in such a case must clearly redefine a claim term 'so as to put a reasonable competitor or one reasonably skilled in the art on notice that the patentee intended to so redefine that claim term.' " Elekta, 214 F.3d at 1307 (*quoting* Process Control Corp. v.

HydReclaim Corp., 190 F.3d 1350, 1357 (Fed.Cir.1999)).

FN1. *Phillips* represents a shift from prior Federal Circuit authority on claim construction. Although the *Phillips* court reaffirmed that "ordinary meaning" is the appropriate starting point in claim-construction analysis, the court overruled Tex. Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002), which instructed district courts to emphasize dictionary definitions as a source for providing ordinary meaning. *See* Phillips, 415 F.3d at 1320 ("[T]he methodology [the *Texas Digital* court] adopted placed too much reliance on extrinsic sources such as dictionaries, treatises, and encyclopedias and too little on intrinsic evidence, in particular the specification and prosecution history."). Post- *Phillips,* district courts are to look to the specification itself as "the single best guide to the meaning of a disputed term." *Id*. at 1321 (citations omitted).

Although claims must be read in view of their specification, the Federal Circuit has repeatedly cautioned against limiting the scope of a claim to the preferred embodiment or specific examples disclosed in the specification. *See* Ekchian v. Home Depot, Inc., 104 F.3d 1299, 1303 (Fed.Cir.1997); Intervet Am., Inc. v. Kee-Vet Labs., Inc., 887 F.2d 1050, 1053 (Fed.Cir.1989) ("[L]imitations appearing in the specification will not be read into claims, and ... interpreting what is *meant* by a word *in* a claim is not to be confused with adding an extraneous limitation appearing in the specification, which is improper." (citation omitted)). Similarly, a court should not read the specification to expand the scope of the claims. Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co., Inc., 285 F.3d 1046, 1052 (Fed.Cir.2002) (*citing* McClain v. Ortmayer, 141 U.S. 419, 424, 12 S.Ct. 76, 35 L.Ed. 800 (1891) ("The claim is the measure of [that patentee's] right to relief, and, while the specification may be referred to to limit the claim, it can never be made available to expand it.")).

Beyond the specification, the Court may also look to the patent's prosecution history if it is a part of the record in the case. Markman, 52 F.3d at 980. "This 'undisputed public record' of proceedings in the Patent and Trademark Office is of primary significance in understanding the claims." *Id.;* Phillips, 415 F.3d at 1317 ("Like the specification, the prosecution history provides evidence of how the PTO and inventor understood the patent."). Again, however, the prosecution history "cannot enlarge, diminish, or vary the limitations in the claims." Markman, 52 F.3d at 980 (citation omitted).

In addition to the intrinsic record, the Court may also consider extrinsic evidence such as dictionaries, encyclopedias, treatises, and inventor and expert testimony to assist it in understanding the technology at issue or in determining the meaning or scope of terms in a claim. Phillips, 415 F.3d at 1317-18; *see also* Aqua-Aerobic Sys., Inc. v. Aerators, Inc., 211 F.3d 1241, 1244-45 (Fed.Cir.2000); Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1579 (Fed.Cir.1996). Although such evidence is generally considered less reliable than the intrinsic record, the Court is free to consider it and may do so at any stage of its inquiry. Phillips, 415 F.3d at 1318-19; *see also* Free Motion Fitness, Inc., v. Cybex Int'l, Inc., 423 F.3d 1343, 1348-49 (Fed.Cir.2005).

III. The '071 Patent

The '071 Patent

relates to an intervertebral implant, having an upper part that has a support face for a vertebra and a lower part that has a support face for an adjacent vertebra, on each of which parts engagement elements, which are

accessible from one side of the intervertebral implant, for a manipulation instrument are disposed, in order to minimize the structural height of the intervertebral implant upon insertion into an intervertebral space.

'071 Patent col.1 ll.3-10. As explained in the patent, intervertebral implants are used to replace disks removed from intervertebral space and therefore must have low structural height to fit into the gap between the vertebrae. Id. at col.1 ll.12-16. Because of requirements that the engagement elements be of certain structural height, a relatively great structural height of the implant is unavoidable when the height of the upper part and lower part are added together. Id. at col.1 ll.44-50. The '071 Patent provides an inventive method for reducing the minimum structural height of the implant, making it easier to insert into the intervertebral space. Id. at col.1 ll.51-54.

This object is attained in accordance with the invention in that it is proposed that the upper part and lower part each have protrusions and recesses aimed at the respectively other part, which are offset laterally from one another in such a way that when the upper part has been brought close to the lower part they mesh with one another....

Id. at col.1 ll.56-61. In addition, "the engagement elements on the upper part and lower part are each disposed in protrusions of these parts in such a way that the engagement elements ... are located side by side and at least partly overlap in the direction of the height of the intervertebral implant." Id. at col.1 ll.61-66.

Specifically, the minimum structural height can be attained because the "regions of great structural height are embodied as protrusions, next to which are respective recesses, into which the protrusions of the respectively other part can dip." Id. at col.2 ll.1-7. "The result is accordingly an internested arrangement of the upper and lower parts, with maximal exploitation of the available material height." Id. at col.2 ll.16-18.

IV. Analysis

A. The Disputed Claims

As with all patents, the '071 Patent is embodied in a document that contains several parts, including an abstract, a background, a detailed description, drawings, and claims. At issue is the construction of terms appearing in the independent claims of the patent, Claims 1 and 19. Claim 1 presents a representative context for the disputed terms and provides the following:

An intervertebral implant insertable between adjacent vertebrae, comprising,

an upper part having an upper surface for engaging a vertebrae and a lower surface which includes a rounded portion,

a lower part having a lower surface for engaging a vertebrae and an upper surface portion in operative engagement with the rounded portion of the upper part, said implant being constructed to be the sole implant in its intervertebral space,

the implant having a lead end which leads as the implant is inserted along a path into the intervertebral space and a trailing end opposite the lead end, and lateral planes which pass through the outermost boundaries of the implant and parallel to the said path, and

a single anchor on each of the upper surface of the upper part and the lower surface of the lower part, each

said anchor being elongated, having a height greater than its width, and located along a line parallel to said path, the two anchors lying essentially in the same vertical plane, which plane is essentially midway between said lateral planes, each said anchor being adapted to enter a groove in the adjacent vertebrae as the implant moves along said path into the intervertebral space, to anchor its respective part to the vertebrae which its surface engages.

'071 Patent col.6 l.55-col.7 l.13.

B. The Disputed Terms

SSI proposes three terms for construction by the Court, while Medtronic proposes five terms. The Court will address each in turn.

1. Adjacent vertebrae

SSI first proposes the Court construe the term "adjacent vertebrae." SSI's proposed construction of the term is "vertebrae that are normally adjacent one another in the patient's spine (no intervening vertebra has been removed)," while Medtronic's proposed construction is "the vertebrae next to the support surfaces of the implant."

In support of its construction, SSI cites the claim language specifying insertion of the implant into "intervertebral space," '071 Patent col.6 ll.63-64, as well as the specification of the '071 patent, which refers to U.S. Patent No. 5,314,477 (filed Mar. 4, 1991) ("'477 Patent") as "[o]ne such intervertebral implant" that "is used to replace a disk removed from the intervertebral space." '071 Patent col.1 ll.10-16. After describing deficiencies in existing implants, such as that of the '477 Patent, the specification goes on to say that "[i]t is the object of the invention to embody an intervertebral implant of this generic type." Id. at col.1 ll.51-52. SSI also cites a statement in the prosecution history that "[w]hile the present application does not illustrate the adjacent vertebrae, such groves are illustrated in Dr. Marnay's previous U.S. Patent No. 5,314,477 which is referenced in the present specification." (Preliminary Amendment, Attach. A (Doc. 115-2), at 1.)

Medtronic claims that SSI's construction reads a limitation into the claim that would exclude the replacement of an entire vertebra, instead of just a disk, and is an attempt to avoid prior art. Medtronic argues that the ordinary meaning of "adjacent" is "next to, adjoining" and that the specification description of "an upper part that has a support face for a vertebra and a lower part that has a support face for an adjacent vertebra" is consistent with this definition. (Defs.' Opening Markman Br. (Doc. 113), at 20.) Medtronic also cites the prosecution history, in which the inventors described a Japanese patent for an implant designed to replace a vertebra as "engag[ing] the adjacent vertebra ." FN2 (Id. at 20.) Medtronic argues that neither the claim language nor the specification support a construction involving "naturally adjacent" vertebrae or precluding the removal of intervening vertebrae. Finally, Medtronic contends that SSI's reliance on a reference to the ' 477 Patent is improper, as that patent was not incorporated by reference into the ' 071 Patent.

FN2. SSI cites deposition testimony of the prosecuting attorney that his characterization of the Japanese prior art as "engag[ing] adjacent vertebrae" was in error. (Dep. of Marvin Petry (Doc. 160-2), at 58.)

The Court first looks to the claim language itself. Claim 1 describes the invention as "[a]n intervertebral implant insertable between adjacent vertebrae." '071 Patent col.6 ll.55-56. As emphasized by SSI, this

description is of an intervertebral implant, not a vertebral one. The ordinary meaning of these words, as one skilled in the art would understand them, is an implant that is inserted in the space between two vertebrae. The specification's reference to the '477 Patent as teaching an implant "used to replace a disk removed from the intervertebral space" supports this understanding as well.FN3 The reference in the prosecution history to a vertebral implant that "engages the adjacent vertebra" is of limited relevance to the construction of the term "adjacent vertebrae" in the context of Claim 1 and is in any event insufficient to overcome the clear teaching of the other intrinsic evidence that the implant described in the ' 071 Patent is designed to replace a disk between vertebrae, and not the vertebrae themselves.

FN3. The Court finds that SSI's reliance on the specification of the '477 is not improper. When the '477 Patent was cited by the examiner in rejecting claims of the '071 Patent application and was distinguished by the applicants during prosecution (see, e.g., Decl. of Thierry Marnay (Doc. 115-2)), the '477 application became incorporated into the intrinsic evidence of the '071 Patent. *See, e.g.,* Goldenberg v. Cytogen, Inc., 373 F.3d 1158, 1168 (Fed.Cir.2004)("[T]he district court made no error to the extent that it referenced the contents of the '262 application as it existed when Goldenberg distinguished the '262 application from the '261 application.... This response constitutes part of the prosecution history of the 261 application...."). The applicants were not required to specifically "incorporate by reference" the '477 Patent. *See, e.g.,* Adang v. Umbeck, 2007 WL 3120323 (Fed.Cir. Oct.25, 2007)(finding that, although the applicant was not required to use the phrase "incorporate by reference," his choice to do so eight times in the specification signaled his intention to treat differently a reference that was not specifically incorporated).

For these reasons, the Court adopts SSI's construction of the term "adjacent vertebrae." The Court holds that one skilled in the art of reading the language of Claim 1, the specification, and the prosecution history as a whole would conclude that the term "adjacent vertebrae" encompasses more than just the two vertebrae next to the support surfaces of the implant. The Court construes the term as meaning "vertebrae that are naturally adjacent one to another in the patient's spine (no intervening vertebra has been removed)."

2. Operative engagement

SSI next proposes the Court construe the term "operative engagement." SSI's proposed construction of the term is "permitting movement (for example pivotability)," while Medtronic's proposed construction is "the interaction between the pivot insert and the rounded portion of the upper part."

SSI argues that its construction is supported by the specification's description of the "pivotability" enabled by the "ball joint" formed from the spherical top of the lower part of the implant and the spherical indentation on the underside of the upper part. In addition, SSI argues that Medtronic's proposed construction, which references the "pivot insert," is incorrect as restricting the claim to a preferred embodiment and inappropriate under the doctrine of claim differentiation.

Medtronic does not dispute that the "operative engagement" includes movement such as pivotability between the parts of the implant. However, Medtronic argues that because the only interaction between the parts described by the specification involves the pivot insert, the claim should be limited to that embodiment.

The central dispute over this claim is whether the preferred embodiment in the specification necessarily limits the claim term. The preferred embodiment of the '071 intervertebral implant has three pieces-an upper

part, a lower part, and a pivot insert that can be thrust between the upper and lower part after they have already been introduced into the intervertebral space. '071 Patent col.4 l.61-col.5 l.8. Claim 1, however, does not specify a lower part in two pieces, or a pivot insert, and only teaches "a lower part having a lower surface for engaging a vertebrae and an upper surface portion in operative engagement with the rounded portion of the upper part." Id. at col.6 ll.60-62. Medtronic argues that the preferred embodiment is the invention of the ' 071 Patent, that the three-piece structure is the only way to achieve the cited object of reduced minimum structural height, that there is no hint of any other embodiment, and that therefore, under these circumstances, the claim should be limited to the embodiment.

Medtronic cites two cases for the proposition that, if only one preferred embodiment is disclosed by the specification, the claim terms may be construed as limited to that embodiment.FN4 As discussed above, however, district courts are cautioned against limiting the scope of a claim to the preferred embodiment in the specification. *See* Ekchian v. Home Depot, Inc., 104 F.3d 1299, 1303 (Fed.Cir.1997)("While examples disclosed in the preferred embodiment may aid in the proper interpretation of a claim term, the scope of a claim is not necessarily limited by such examples."); Intervet Am., Inc. v. Kee-Vet Labs., Inc., 887 F.2d 1050, 1053 (Fed.Cir.1989). "In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." Phillips, 415 F.3d at 1323 (*citing* Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n, 383 F.3d 1352, 1366 (Fed.Cir.2004)).

FN4. The first, LizardTech, Inc. v. Earth Research Mapping, Inc., 433 F.3d 1373, 1375 (Fed.Cir.2006)(Lourie, J., concurring), a concurring opinion to a per curiam denial of a petition for rehearing en banc, affirmatively states that "[c]laims are not necessarily limited to preferred embodiments, but, if there are no other embodiments, and no other disclosures, then they may be so limited." However, in the original case before the three-judge panel, 424 F.3d 1336, 1344 (Fed.Cir.2005), the court actually construed the disputed claim as not limited by the specification, and therefore the language cited by Medtronic appears to be dicta. The second case cited by Medtronic on this issue, Wang Labs., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1383 (Fed.Cir.1999), held that
[w]hether an invention is fairly claimed more broadly than the "preferred embodiment" in the specification is a question specific to the content of the specification, the context in which the embodiment is described, the prosecution history, and if appropriate the prior art, for claims should be construed, when feasible, to sustain their validity. The usage "preferred" does not of itself broaden the claims beyond their support in the specification.

In light of this strong precedent, the Court declines to read the "pivot insert" limitation into the "operative engagement" term. Claim 1 does not include any limitation on the number of pieces of which the lower part is to be composed, and the specification, although referring to the embodiment including the pivot insert, focuses on the shape of the surfaces in contact with one another in the implant in describing the operative engagement of the upper and lower part. *See, e.g.,* '071 Patent col.5 ll.22-27 ("[T]he spherical top side 25 dips in complimentary fashion into the spherically curved indentation 12 on the underside of the protrusion 10, where with the upper part 2 it forms a ball joint, which enables a certain pivotability of the upper part 2 relative to the lower part 3 (FIG.7)."); id. at col.5 ll.49-53 ("A pivot insert 4, when joined to the lower part 3, as shown for example in FIG. 3, provides a convex upper surface portion 25, preferably spherical, in operational engagement with the rounded portion 12 of the upper part .").

In addition, under the doctrine of claim differentiation, the "two-piece" limitation contained in several dependent claims should not be read as a limitation on independent Claims 1 and 19. *See* '071 Patent col.7 ll.17-20, 55-59, col.8 ll.40-43, col.9 ll.1-5. The doctrine of claim differentiation instructs "that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope." Seachange Int'l, Inc. v. C-COR, Inc., 413 F.3d 1361, 1368 (Fed.Cir.2005) (*quoting* Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971-72 (Fed.Cir.1999). The doctrine "normally means that limitations stated in dependent claims are not to be read into the independent claim from which they depend." Karlin, 177 F.3d at 972. Although the doctrine only creates a rebuttable presumption that the claims have different scope and is not a "hard and fast rule," Seachange, 413 F.3d at 1369, here the other intrinsic evidence, as discussed above, weighs in favor of SSI's construction and does not serve to rebut the presumption created by claim differentiation.

For these reasons, the Court adopts SSI's construction of the term "operative engagement." Medtronic's proposal, which reads the "pivot insert" limitation into the independent claims of the patent, is not required or appropriate in this case. The Court construes the term as meaning "permitting movement (for example pivotability)."

3. Lateral planes which pass through the outermost boundaries of the implant

SSI finally proposes the Court construe the term "lateral planes which pass through the outermost boundaries of the implant." SSI's proposed construction of the term is "planes which touch on the outermost boundaries of the implant. These planes define a vertical midway plane between them, and need not coincide with physical sides of the implant." Medtronic contends that no construction of the term can be offered as there is no support for the limitation in the specification, and thus the limitation is indefinite.

SSI supports its proposed construction under the doctrine of claim differentiation, arguing that the independent claims refer only to "lateral planes which pass through the outermost boundaries," while several dependent claims refer specifically to the "sides" of the implant. The purpose of the "lateral planes" language is to locate the anchors, whose "plane is essentially midway between said lateral planes." Accordingly, there is no need to equate the lateral planes with the physical sides, and the lateral planes must only touch on the outermost boundaries of the implant, regardless of its shape. SSI also cites the prosecution history, indicating that application claim 55 was originally amended to recite lateral planes "passing through opposed side surfaces," but this claim was later amended to lateral planes "which pass through the outermost boundaries," indicating that the "boundaries" need not coincide with the "side surfaces."

Medtronic argues that SSI's construction, as well as the claim language itself, is nonsensical, and that without any limitation on boundaries or the shape of the implant, one skilled in the art would not be able to determine the plane where the anchors are located. In addition, the lateral planes could be oriented in a broad range of directions, and any reference to the planes being parallel to the path of insertion would be an impermissible method step, rendering the claim indefinite and invalid. Medtronic also argues that the description of lateral planes in the specification is new matter upon which the Court should not rely.

The Court finds that the orientation of the lateral planes is not indefinite. Although Medtronic argues that "the claimed 'lateral planes' could occur in a broad range of directions entirely undefined in the patent" (Defs.' Resp. Markman Br. (Doc. 142), at 8), the claim language states that the "lateral planes [are] parallel to the [insertion] path" ('071 Patent col.6 l.67-col.7 l.2), providing only one possible "direction" in which the planes could occur. Medtronic argues that this reference impermissibly attempts to define the structure

by a method step, in that the direction of the lateral planes could not be determined until the implant is inserted along a path. (Defs.' Reply Markman Br. (Doc. 159), at 15.) When a claim recites both an apparatus and a method of using that apparatus, the claim is indefinite and should be rejected because "a manufacturer or seller of the claimed apparatus would not know from the claim whether it might also be liable for contributory infringement because a buyer or user of the apparatus later performs the claimed method of using the apparatus." IPXL Holdings, L.L.C. v. Amazon.com, Inc.,[FN5] 430 F.3d 1377, 1384 (Fed.Cir.2005)(*citing Ex Parte* Lyell, 17 U.S.P.Q.2d (BNA) 1548, 1550 (B.P.A.I.1990)). However, "[t]he *IPXL* rule does not apply 'where the claims require capability, but not actual use.' " *Yodlee, Inc. v. Cashedge, Inc.,*[FN6] 2006 U.S. Dist. LEXIS 86699, at (N.D.Cal. Nov. 29, 2006)(*quoting Collaboration Props ., Inc. v. Tandberg ASA,*[FN7] 2006 U.S. Dist. LEXIS 42465, at (N.D. Cal. June 22, 2006)); *see also* Microprocessor Enhancement Corp. v. Texas Instruments, Inc., 520 F.3d 1367, 1375 (Fed.Cir.2008) ("[A]pparatus claims are not necessarily indefinite for using functional language."). A "functional limitation," as opposed to an improper, mixed method-apparatus claim, "is 'an attempt to define something by what it does, rather than by what it is' " and is not, in and of itself, improper. *Yodlee,* 2006 U.S. Dist. LEXIS at (*quoting* Collegenet, Inc. v. XAP Corp., 442 F.Supp.2d 1036, 1062 (D.Or.2006)). The description at issue here does not include a method step. The claim recites "lateral planes ... parallel to the [insertion] path," but it does not actually require that the implant be inserted along a path. Like the claims in *Yodlee* and *Collaboration,* the terms at issue here "use active language to describe the *capability* of the apparatuses; they do not claim the activity itself." *Id.*

FN5. The claim language at issue in *IPXL* reads "[t]he system of claim 2 wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and *the user uses the input means* to either change the predicted transaction information or accept the displayed transaction type and transaction parameters." U.S. Patent 6,149,055 col.22 ll.8-13 (filed June 26, 1996)(emphasis added); *see also* IPXL, 430 F.3d at 1384. The court found this language to "recite[ ] both the system of claim 2 and a method for using that system," IPXL, 430 F.3d at 1384, rendering the claim invalid.

FN6. The claim language at issue in *Yodlee* reads
A computer-readable storage device storing instructions that upon execution cause a processor to automatically access personal information associated with an end user, wherein the personal information is stored on a personal information provider by performing the steps comprising of:

(a) presenting on a client computer associated with the end user and in communication with the personal information provider via a network a representation of personal information and a link corresponding to the personal information stored on the personal information provider;

(b) *upon activation of the presented link,* downloading an application to the client computer, wherein the downloaded application upon execution on the client computer performs [a series of steps].

U.S. Patent 6,405,245 col.18 ll.21-47 (filed Oct. 27, 1999)(emphasis added); *see also Yodlee,* 2006 U.S. Dist. LEXIS at *12-13. The *Yodlee* court found that "[t]he claim describes what happens 'upon activation of the presented link" and "does not seek to patent activation of the link; it seeks only to patent a device which performs certain functions if and when the link is activated." *Yodlee,* 2006 U.S. Dist. LEXIS at *13. The court likened the functional limitation to a hypothetical claim describing a pair of scissors ("upon opening and closing the sharp edges of the scissors on a piece of paper, the paper is cut"), in which the language claims the capability and function of the scissors but not the method of using the scissors. *Id.*
FN7. The claim language at issue in *Collaboration* reads "[a] telephonic system for conducting a teleconference among a plurality of participants ... wherein, *the system is configured to reproduce* images...." U.S. Patent 5,867,654 col.41 ll.36-55 (filed June 7, 1996) (emphasis added); *see also Collaboration,* 2006 U.S. Dist. LEXIS at *15. The *Collaboration* court held that the language recited the functionality of the system, not the act of using the system. *Collaboration,* 2006 U.S. Dist. LEXIS at *16.

For these reasons, the Court adopts SSI's construction of the term "lateral planes which pass through the outermost boundaries of the implant." FN8 The construction is sufficiently definite and uses reasonable language to define the location of the anchors. The Court construes the term as meaning "planes which touch on the outermost boundaries of the implant. These planes define a vertical midway plane between them, and need not coincide with physical sides of the implant."

FN8. Because the Court determines that SSI's construction is sufficient based on the claim language itself, the Court will not address at this time Medtronic's argument that language in the specification on which SSI relied, specifically '071 Patent col.6 ll.39-43, is new matter that constitutes a departure from or addition to the original disclosure.

4. Lower part having ... an upper surface portion in operative engagement with the rounded portion of the upper part

Medtronic first proposes the Court construe the term "lower part having ... an upper surface portion in operative engagement with the rounded portion of the upper part." Medtronic's proposed construction of the term is "the pivot insert portion of the lower part that provides a convex upper surface portion that supports the upper part of the implant," while SSI's proposed construction is "the lower part of the implant has a portion of its upper surface permitting movement (for example pivotability) with respect to the rounded portion of the upper part."

Having already adopted SSI's construction of the term "operative engagement" as "permitting movement (for example pivotability)," the Court adopts SSI's construction of the term "lower part having ... an upper surface portion in operative engagement with the rounded portion of the upper part." As discussed *supra* Section IV.B.2, the Court finds that the "pivot insert" language is an inappropriate limitation based on the preferred embodiment and would be improper under the doctrine of claim differentiation. The Court construes the term as meaning "the lower part of the implant has a portion of its upper surface permitting movement (for example pivotability) with respect to the rounded portion of the upper part."

5. A lead end which leads as the implant is inserted along a path

Medtronic next proposes the Court construe the term "a lead end which leads as the implant is inserted along a path." Medtronic's proposed construction of the term is "the movement of the front end of the

implant as a user inserts the implant along an insertion direction from outside of the patient, into the patient, and then into the intervertebral space." SSI contends that the claim language is clear and does not require construction but, to the extent necessary, proposes a construction of "a portion of the implant which is toward the front of the implant as the implant is inserted along a path."

Medtronic argues that this term defines the "lead end" of the implant, a structural element, with only a reference to the action of a user, and that the portion of the implant that is "toward the front" is not known until a user inserts the implant into a patient. Medtronic's proposed construction, which makes the user's action explicit, clarifies its characterization of the term as impermissibly including both an apparatus description and a method step.

SSI contends that the term describes only the structure of the implant and not a method for its insertion, with the "path" employed merely as a point of reference. SSI argues that there is no reason to construe the term as requiring "movement" of the front end, as Medtronic has proposed, because of the difference in syntax between "movement" and "lead end." In addition, SSI reiterates its argument that the term defines the structure by reference to its function and does not include a method step.

As discussed *supra* Section IV.B.3, claims that define a functional limitation, and that require capability but not actual use, are not improper, mixed method-apparatus claims. *See* Microprocessor Enhancement Corp. v. Texas Instruments, Inc., 520 F.3d 1367, 1375 (Fed.Cir.2008); *Yodlee, Inc. v. Cashedge, Inc.,* 2006 U.S. Dist. LEXIS 86699, at (N.D.Cal. Nov. 29, 2006). Such is the case here, where the language uses the capability of the implant being insertable along a path to describe the functionality of the lead end. In addition, this functional description is not the only way to identify which portion of the implant is the lead end-the claim teaches that the lead end is opposite the "trailing end," which, in dependent Claim 11, has "apertures ... for receiving inserting instruments" and is therefore identifiable as the trailing end. ' 071 Patent col.6 ll.65-67, col.7 ll.45-47.

The Court adopts SSI's construction of the term "a lead end which leads as the implant is inserted along a path." The claim is not a mixed method-apparatus claim and does not require construction describing "movement." The Court construes the term as meaning "a portion of the implant which is toward the front of the implant as the implant is inserted along a path."

6. Single anchor

Medtronic next proposes the Court construe the term "single anchor." Medtronic's proposed construction of the term is "the sole protrusion, which fixes the upper or lower part of the implant to bone," while SSI's proposed construction is

the upper and lower surfaces of the implant each have one anchor having the characteristics recited in the last paragraph of the claim (elongated, height greater than width, parallel to an insertion path, lying essentially in a vertical plan essentially between lateral planes, and adapted to enter a groove in the adjacent vertebrae). This "single anchor" limitation does not exclude the presence of other anchoring structures on the upper and lower surfaces.

Medtronic's construction is based on the ordinary meaning of "single" being "not accompanied by others, solitary." (Defs.' Opening Markman Br. 15.) Because SSI expressly distinguished its single anchor from prior art with dual anchors, stating that "a reference disclosing two anchors does not disclose a device

affirmatively claiming a single anchor," Medtronic contends that SSI cannot now claim that the "single anchor" limitation does not exclude other anchors or anchoring structures. (Id. at 16, 17.)

SSI agrees with Medtronic's characterization of the term "single" but responds that the term "single anchor" refers to a single keel-type anchor and that the implant may have other anchoring structures beyond that "single anchor." The term "single anchor" is followed by a series of characteristics that the single anchor must have, including height and length restrictions, and SSI argues that any structures that do not meet those characteristics may exist on the implant. SSI claims that Medtronic's construction would exclude the preferred embodiment, which includes multiple protrusions. SSI also cites the prosecution history, in which the applicant told the patent examiner that the smaller protrusions "are clearly not contemplated to constitute anchors and do not in fact function in any manner like the anchors 6 and 14." (Pl.'s Opening Markman Br. (Doc. 115), at 17.)

"[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms," and "the context in which a term is used in the asserted claim can be highly instructive." Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed.Cir.2005). Here, the term "single anchor" is used in Claims 1 and 19 in the following context:

a single anchor on each of the upper surface of the upper part and the lower surface of the lower part, each said anchor being elongated, having a height greater than its width, and located along a line parallel to said path, the two anchors lying essentially in the same vertical plane, which plane is essentially midway between said lateral planes, each said anchor being adapted to enter a groove in the adjacent vertebrae as the implant moves along said path into the intervertebral space, to anchor its respective part to the vertebrae which its surface engages.

'071 Patent col.7 ll.3-13. Based on this context, the "anchor" used in the term "single anchor" is clearly the same "anchor" described in the remaining language, namely one that is elongated, has a height greater than its width, is located parallel to the insertion path, is essentially midway between the lateral planes of the implant, and is adapted to enter a groove. Any protrusion not meeting these characteristics is not an "anchor" within the meaning of this claim. The specification (*see, e.g.,* '071 Patent col.3 ll.56-60, col.4 ll.9-12) and the prosecution history cited by SSI support this understanding as well. Medtronic's focus on the distinction between single-and dual-anchor implants is misplaced, as the other protrusions in the preferred embodiment of the '071 patent do not constitute "anchors," as defined therein.

For these reasons, the Court adopts SSI's construction of the term "single anchor." The term refers not to any protrusion on the implant, as Medtronic proposes, but rather to a specifically defined, keel-type structure. The Court construes the term as meaning

the upper and lower surfaces of the implant each have one anchor having the characteristics recited in the last paragraph of the claim (elongated, height greater than width, parallel to an insertion path, lying essentially in a vertical plan essentially between lateral planes, and adapted to enter a groove in the adjacent vertebrae). This "single anchor" limitation does not exclude the presence of other anchoring structures on the upper and lower surfaces.

7. Each said anchor being elongated

Medtronic next proposes the Court construe the term "each said anchor being elongated." Medtronic's

proposed construction of the term is "each anchor having a length greater than fifty percent of the length of the surface for engaging a vertebra, measured in the direction of movement of the implant into the intervertebral space." SSI contends that the claim language is clear and does not require construction but, to the extent necessary, proposes a construction of "extends for a length substantially greater than its width" along the respective surface.

Medtronic proposes construction of this term because the claim itself gives no context from which to draw its meaning-Medtronic therefore proposes a construction utilizing a description contained in the specification stating that "the length of the anchors ... is greater than one half of the overall dimension of its respective part from its anterior to its posterior, passing through that anchor." (Pl.'s Opening Markman Br. 18.) Medtronic argues that by giving this "special definition" that differs from the ordinary meaning of the term, the inventor has supplied the definition and his lexicography should govern. (Defs.' Resp. Markman Br. 17.)

SSI argues that this description in the specification is merely a description of the preferred embodiment and does not constitute a definition of the claim term "elongated." SSI also contends that Medtronic's proposed language related to the direction of the anchor is excessive and unnecessary.

As discussed *supra* Section IV.B.2, the Court will not read the preferred embodiment to limit these claims. *See also* Phillips, 415 F.3d at 1323. The specification's description of an anchor "greater than one half of the overall dimension of its respective part" is not a definition of the term "elongated;" it is an embodiment of that term. In addition, this description does not differ from the ordinary definition of "elongated," *see, e.g .*, *Webster's New Collegiate Dictionary* (Merriam-Webster 9th ed.1991) (defining "elongated" as "1: stretched out 2: slender"); it merely refines that definition to a specific iteration, and therefore it need not govern the use of the term. *See, e.g.,* Phillips, 415 F.3d at 1316 ("[T]he 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.").

For these reasons, the Court adopts SSI's construction of the term "each said anchor being elongated." SSI's more general construction is preferable to the unnecessarily restrictive one proposed by Medtronic. The Court construes the term as meaning "extends for a length substantially greater than its width."

8. Anchor being adapted to enter a groove in the adjacent vertebrae as the implant moves along said path

Medtronic finally proposes the Court construe the term "anchor being adapted to enter a groove in the adjacent vertebrae as the implant moves along said path." Medtronic contends that no construction of the term can be offered as there is no support for the limitation in the specification, and thus the limitation is indefinite. SSI contends that the claim language is clear and does not require construction but, to the extent necessary, proposes a construction that each recited anchor "has a height and width adapted to move into a groove formed in the adjacent vertebrae."

Medtronic argues that the lack of written description or guidance regarding the term "groove" renders the claim indefinite and invalid. The specification gives no information as to the size, shape, placement, and necessity of the grooves. Medtronic also again argues that this term impermissibly includes a method step.

SSI responds that the repeated references in the specification and prosecution history to the '477 patent,

which includes a full description of the grooves, provides clear guidance to a person of ordinary skill in the art as to what it means to be "adapted to enter a groove." SSI further argues that the term is a structural limitation and does not incorporate a method step.

As discussed *supra* note 2, the patentee was not required to explicitly incorporate the '477 Patent by reference to rely on its teachings, and the ' 477 Patent is part of the intrinsic evidence of the '071 Patent. The ' 477 Patent, which describes the process of using a chisel to make mortises for providing grooves in which to insert the anchors, '477 Patent col.5 ll.18-23, ll.35-42, col.6 ll.42-57, provides one skilled in the art with sufficient information to understand the term "anchor being adapted to enter a groove."

In addition, as discussed *supra* Sections IV.B.3 and IV.B.5, the term "as the implant moves along said path" does not require the action of moving the anchor along a path, but rather requires the capability of the anchor to move along the path in order to enter a groove. This functional limitation is not an impermissible method step. *See* Microprocessor Enhancement Corp. v. Texas Instruments, Inc., 520 F.3d 1367, 1375 (Fed.Cir.2008).

For these reasons, the Court adopts SSI's construction of the term "anchor being adapted to enter a groove in the adjacent vertebrae as the implant moves along said path." The language "adapted to enter a groove" is not indefinite given the description in the '477 patent, and the term does not include a method step. The Court construes the term as meaning "has a height and width adapted to move into a groove formed in the adjacent vertebrae."

IV. Conclusion

In conclusion, the Court construes the disputed terms of Claims of 1 and 19 of the '071 patent as follows:

(1) the term "adjacent vertebrae" means "vertebrae that are naturally adjacent one to another in the patient's spine (no intervening vertebra has been removed)";

(2) the term "operative engagement" means "permitting movement (for example pivotability)";

(3) the term "lateral planes which pass through the outermost boundaries of the implant" means "planes which touch on the outermost boundaries of the implant. These planes define a vertical midway plane between them, and need not coincide with physical sides of the implant";

(4) the term "lower part having ... an upper surface portion in operative engagement with the rounded portion of the upper part" means "the lower part of the implant has a portion of its upper surface permitting movement (for example pivotability) with respect to the rounded portion of the upper part";

(5) the term "a lead end which leads as the implant is inserted along a path" means "a portion of the implant which is toward the front of the implant as the implant is inserted along a path";

(6) the term "single anchor" means "the upper and lower surfaces of the implant each have one anchor having the characteristics recited in the last paragraph of the claim (elongated, height greater than width, parallel to an insertion path, lying essentially in a vertical plan essentially between lateral planes, and adapted to enter a groove in the adjacent vertebrae). This 'single anchor' limitation does not exclude the presence of other anchoring structures on the upper and lower surfaces";

(7) the term "each said anchor being elongated" means "extends for a length substantially greater than its width"; and

(8) the term "anchor being adapted to enter a groove in the adjacent vertebrae as the implant moves along said path" means "has a height and width adapted to move into a groove formed in the adjacent vertebrae."

SO ORDERED.

W.D.Tenn.,2008.
Spine Solutions, Inc., v. Medtronic Sofamor Danek, Inc.