Trials@uspto.gov
571-272-7822

Paper No. 14
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INSTRADENT USA, INC.,
Petitioner

v.

NOBEL BIOCARE SERVICES AG,
Patent Owner.

Case IPR2015-01786
Patent 8,714,977 B2

Before WILLIAM V. SAINDON, TINA E. HULSE, and CHRISTOPHER G. PAULRAJ, *Administrative Patent Judges.*

PAULRAJ, *Administrative Patent Judge.*

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Instradent USA, Inc. ("Petitioner") filed a Petition (Paper 2, "Pet."), requesting institution of an *inter partes* review of claims 1–7, 9, and 13–20 of U.S. Patent No. 8,714,977 B2 (Ex. 1001, "the '977 patent"). Nobel Biocare Services AG ("Patent Owner") timely filed a Preliminary Response (Paper 6, "Prelim. Resp."). We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

Upon consideration of the Petition and the Preliminary Response, and for the reasons explained below, we determine that Petitioner has shown that there is a reasonable likelihood that it would prevail with respect to at least some of the challenged claims. We thus institute an *inter partes* review of claims 1–5, 19, 20 of the '977 patent.

A. Related Proceedings

The parties have identified concurrent proceedings, related to the '977 patent, before the International Trade Commission ("ITC") (*Certain Dental Implants*, Inv. No. 337-TA-934) and in the Central District of California (*Nobel Biocare Services AG and Nobel Biocare USA, LLC, v. Neodent USA, Inc.*, Civil Action No. 14-1322 DOC (DFMx)(C.D. Cal.)), which is stayed pending resolution of the ITC investigation. Pet. 1–2; Prelim. Resp. 1–2, 9–11.

On October 27, 2015, the ITC's Administrative Law Judge ("ALJ") issued an Initial Determination finding claims 1–5 and 19 of the '977 patent invalid as being anticipated by the 2003 Alpha Bio Tec (ABT) Catalog. Ex. 2001, 60–65. The ITC has determined to review in part the ALJ's

determination regarding the proper construction of the limitation "coronal region having a frustoconical shape" recited in claim 1, as well as the conclusion that the 2003 ABT Catalog qualifies as prior art and anticipates the claims. Ex. 1029, 3–4. Although we have taken the ITC's Initial Determination into account, we make an independent determination of patentability of the challenged claims based on the evidence before us and the standards applicable to an *inter partes* review.

B. The '977 Patent (Ex. 1001)

The '977 patent issued on May 6, 2014, and claims priority to a foreign application filed on May 21, 2003. *See* Ex. 1001, Title Page. It names Ophir Fromovich, Yuval Jacoby, Nitzan Bichacho, and Ben-Zion Karmon as the inventors. *Id.*

The '977 patent relates generally to a dental implant comprising a "coronal" end with inverse tapering, an "apical" end opposite the coronal end, and a tapered "core" region with a variable profile helical thread. *Id.*, Abstract. The '977 explains that the coronal region of the implant is to be placed below the bone level such that bone covers this region. *Id.* at 2:62–66. Additionally, "the most coronal aspect of the coronal end is tapered coronally forming [a] narrower coronal edge." *Id.* at 4:5–7. Furthermore, according to the '977 patent, "[t]he implant features a tapered profile and a unique external thread profile that offers superior stability when it is implanted in low density bone while insertion is easy." *Id.* at 17:4–7. Specifically, the external thread changes profile from the coronal to the apical ends, "having a sharp, narrow and high profile at the extreme apical end, particularly suited for cutting into non-tapped bone, and having a broad,

rounded and low profile at the coronal end, particularly suited for compression of bone tapped by the thread at the apical end." *Id.* at 17:9–15.

One embodiment of the dental implant taught in the '977 patent is shown in Figure 1, reproduced below:

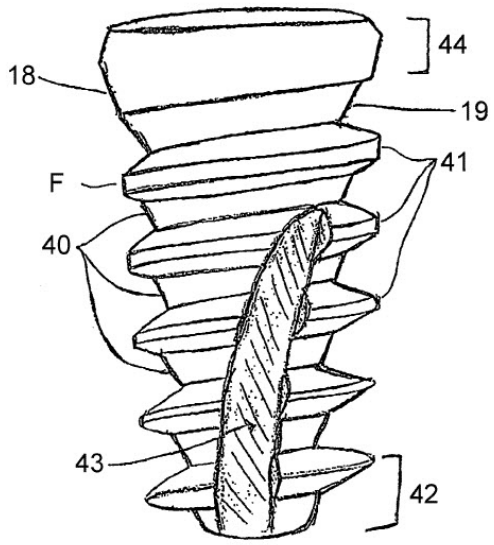


FIG. 1

As depicted in Figure 1, the dental implant includes "the core of the implant 40," "the threads 41," the "most apical region 42 which touches the bone first," "the bone tap 43," and "the most coronal region 44 which engages the cortical bone and . . . sometimes also the gums." Ex. 1001, 7:57–64.

According to the '977 patent, the combination of these aspects allows for a dental implant that is "easily inserted" with minimal drilling, "to easily dictate the location of the implant, to allow good stabilization in the bone[,] and to allow the bone to be above the intra-bony coronally tapered region." *Id.* at 17:26–31.

C. Illustrative Claim

Petitioner challenges claims 1–7, 9, and 13–20 of the '977 patent. Independent claim 1 is illustrative, and reproduced below:

1. A dental implant comprising:

a body;

a coronal region of the body, the coronal region having a frustoconical shape wherein a diameter of an apical end of the coronal region is larger than a diameter of a coronal end of the coronal region;

an apical region of the body, the apical region having a core with a tapered region wherein a diameter of an apical end of the core is smaller than a diameter of a coronal end of the core and the apical end of the core is substantially flat; and

a pair of helical threads extending from the body along at least a portion of the apical region, each of the threads comprising an apical side, a coronal side, and a lateral edge connecting the apical side and the coronal side, a base connecting the threads to the core, a thread height defined between the lateral edge and the base, the lateral edge having a variable width that is expanded along a segment in the direction of the coronal end of the apical region, so that a least width of the lateral edge of the threads is adjacent the apical end of the apical region and a greatest width of the lateral edge of the threads is adjacent the coronal end of the apical region, and the threads having a variable height that is expanded substantially along the segment of the implant in the direction of the apical end of the apical region, so that a least height of the threads is adjacent the coronal end of the apical region and a greatest height at apical end of the apical region; and

a bone tap, wherein the helical threads starts at said bone tap and said substantially flat apical end of the core;

> wherein each of the helical threads have a thread step that is defined as a distance along a longitudinal axis of the dental implant covered by a complete rotation of the dental implant, the thread step is between 1.5–2.5 mm.

D. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of the claims of the '977 patent on the following grounds:

Reference(s)	**Basis**	**Claims challenged**
ABT Catalog[1]	§ 102(b)	1–5, 9, and 16–19
Update Journal[2]	§ 102(b)	9 and 16–18
Update Journal and Anthogyr Catalog[3]	§ 103(a)	1–5, 19, and 20
Update Journal and ITI Manual[4]	§ 103(a)	1–7 and 13–15, 19, and 20

After Petitioner filed its Petition, Patent Owner filed a statutory disclaimer of claims 9 and 13–18 of the '977 patent under 35 U.S.C. § 253(a). Prelim. Resp. 11–12. The disclaimer, Ex. 2007, is in compliance with 37 C.F.R. § 1.321(a). 37 C.F.R. § 42.107(e) provides: "The patent owner may file a statutory disclaimer under 35 U.S.C. 253(a) in compliance with § 1.321(a) of this chapter, disclaiming one or more claims in the patent. No *inter partes* review will be instituted based on disclaimed claims."

[1] ALPHA BIO SYSTEM CATALOG (2003) ("ABT Catalog," Ex. 1008).
[2] ISREAL DENTAL UPDATE (2003) ("Update Journal," Ex. 1009).
[3] THE IMPLANTOLOGY SERENELY IMPLANTS ANTHOGYR ("Anthogyr Catalog," Ex. 1014).
[4] DAS ITI-SCHRAUBENIMPLANTAT (TPS) ("ITI Manual," Ex. 1016).

Accordingly, we do not institute an *inter partes* review of claims 9 and 13–18.

II. DISCUSSION

A. Claim Construction

We interpret claims using the "broadest reasonable construction in light of the specification of the patent in which [they] appear[]." 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015) ("Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,"[5] and "the standard was properly adopted by PTO regulation."), *cert. granted*, *Cuozzo Speed Techs., LLC v. Lee*, 84 U.S.L.W. 3218 (U.S. Jan. 15, 2016) (No. 15-446). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). "Absent claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification . . . when [it] expressly disclaim[s] the broader definition." *In re Bigio*, 381 F.3d 1320, 1325 (Fed Cir. 2004). "Although an inventor is indeed free to define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

[5] The Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) ("AIA").

1. "coronal region having a frustoconical shape" (claim 1).

Independent claim 1 of the '977 Patent recites a "coronal region having a frustoconical shape."

Petitioner contends that this limitation should be construed as "the coronal region has, partly or entirely, a frustoconical shape." Pet. 7–16. Petitioner asserts that the term "having" is open-ended, "thereby allowing some portion of the coronal region to have other shapes in addition to a frustoconical shape." *Id.* at 8 (citing *Lampi Corp. v. American Power Products Inc.*, 228 F.3d 1365, 1376 (Fed. Cir. 2000)). Pointing to the recitation of "entire threaded region" in claim 9, Petitioner argues that "the patentee knew how to indicate that a whole region had a certain structure." *Id.* at 9–10. Petitioner also points to dependent claim 3, which recites that "the apical end of the coronal region defines an upper limit of the threads." *Id.* at 11. Petitioner also relies upon the embodiments illustrated in Figures 5, 8, and 9 as showing coronal regions that do not have an entirely frustoconical shape. *Id.* at 13.

Patent Owner contends that the plain language of claim 1 requires that "the coronal region as a whole—not some part or portion of the coronal region—has a frustoconical shape." Prelim. Resp. 43–44. Patent Owner argues that "[w]here a patent claim recites an adjective that specifies a shape, courts examine the claim language to identify the structure that the adjective modifies," and "consistently hold that the claim is not satisfied where only a portion of that structure has the specified shape, but the structure as a whole does not." *Id.* at 44 (citing *Norgren Inc. v. Int'l Trade Comm'n*, 699 F.3d 1317, 1323 (Fed. Cir. 2012); *Schoell v. Regal Marine Indus., Inc.*, 247 F.3d 1202, 1209 (Fed. Cir. 2001); *Cacace v. Meyer Mktg.*,

812 F. Supp. 2d 547, 554 (S.D.N.Y. 2011)). Patent Owner also argues that Petitioner's construction would unreasonably cover all dental implants. *Id.* at 45–46. Additionally, Patent Owner contends that the '977 patent specifies that the axial height of the tapered coronal region is preferably 1–3 mm and, thus, construing the claims such that the frustoconical shape can be satisfied by any part of the coronal region, "such as a tiny edge break or mating bevel," would be inconsistent with the disclosed purpose of the coronal taper to permit bone to relapse and promote implant stability. *Id.* at 48.

We have considered the parties' arguments, and, based on the record at this stage of the proceeding, determine that the broadest reasonable interpretation of a "coronal region having a frustoconical shape" is a coronal region that has, partly or entirely, a frustoconical shape.[6] First, looking at the claim term itself, we note that transitional phrases such as "having" are not necessarily open or closed. *See, e.g.*, *Lampi Corp. v. American Power Prods. Inc.*, 228 F.3d 1365, 1376 (Fed. Cir. 2000) (interpreting the term "having" as open terminology, allowing the inclusion of other components in addition to those recited); *Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l Inc.*, 246 F.3d 1336, 1348 (Fed. Cir. 2001) (term "having" in transitional phrase "does not create a presumption that the body of the claim is open"); *Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1573 (Fed. Cir. 1997) (in the context of a cDNA having a sequence coding for human PI, the term "having" still permitted inclusion of

[6] Our construction is consistent with the ITC's Initial Determination, which construed the same term under the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*). Ex. 2001, 29. We recognize that the ITC has chosen to review this construction. Ex. 1029, 3.

other moieties). Notwithstanding, the claim drafter specifically chose not to use the conventional phrase for limiting the openness of a claim—"consisting of." In the context of this claim, there is nothing that physically or logically prevents the structure from having a portion that is frustoconical and a portion that is not. Thus, there is nothing in the claim itself that precludes the coronal region from having more than just a frustoconical portion. We next consider the specification.

The specification of the '977 patent does not require the narrower construction proposed by Patent Owner. To the contrary, at least some of the dental implant embodiments illustrated in the '977 patent include a coronal region above the threaded region with shapes and angles besides an entirely frustoconical shape. *See, e.g.*, Ex. 1001, Figs. 5, 8, 9. Although the '977 patent also illustrates other embodiments in which the entire coronal region has a frustoconical shape (*e.g.*, Fig. 12), we are not persuaded on this record that the claimed invention is only limited to those particular embodiments rather than the broader disclosure of the patent. Moreover, our construction is consistent with the '977 patent's disclosure referring only to the "most coronal aspect of the coronal end" as being tapered. *See, e.g.*, *id.* at 4:5–7 (claims 19, 20). If only the "most coronal" portion needs to be tapered, this implies that other portions of the coronal region need not have a frustoconical shape.

2. "a most coronal aspect of the coronal end is tapered coronally" (claims 19 and 20).

Claims 19 and 20, which depend upon now-disclaimed claim 9,[7] recite "a most coronal aspect of the coronal end is tapered coronally forming narrower coronal edge" and "a most coronal aspect of the coronal end is tapered coronally, and wherein the threads reach the coronally tapered aspect," respectively.

Petitioner contends that the limitation "a most coronal aspect of the coronal end is tapered coronally" should be construed to mean that "a furthermost portion of the coronal end (from the apical end) has a width that is reduced in the direction of the coronal end of the implant." Pet. 17. Although Patent Owner proposed a different construction before the ITC, Patent Owner has not argued for that construction or proposed any other construction for this limitation in its preliminary response. *Id.* Based on the record at this stage of the proceeding, we determine that Petitioner's construction is consistent with the broadest reasonable interpretation in light of the specification.

[7] We construe dependent claims 19 and 20 as incorporating the limitations of claim 9, which does not include the requirement of a "coronal region having a frustoconical shape." *See* 35 U.S.C. § 112(d) ("[A] claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers."); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,764–65 (Aug. 14, 2012) ("Where one or more challenged claims remain [after a statutory disclaimer], the Board's decision on institution would be based solely on the remaining claims.") (citing *Sony Comput. Entm't Am. Inc. v. Dudas*, 2006 WL 1472462 (E.D.Va. 2006)).

3. "surface configured to be in contact with bone" (Claim 2)

Dependent claim 2 recites that "the coronal region has a surface configured to be in contact with bone." Petitioner has not proposed a construction for this term. However, Patent Owner asserts that, in the ITC proceeding, the parties agreed that this limitation should be construed as "designed or constructed to enhance osseointegration." Prelim. Resp. 49 (citing Ex. 2001, 32). Patent Owner contends that "[n]ot requiring this surface to be designed or constructed to enhance osseointegration would unreasonably read the language 'surface configured' out of the claim by allowing any surface that simply abuts bone to satisfy Claim 2." *Id.* at 50.

Based on the record at this stage of the proceeding, we decline to adopt Patent Owner's proposed construction for this limitation. Patent Owner points to the '977 patent's disclosure that the implant "preferably can have rough surface like TiUnite, S.L.A., Osseotite, [and] Hydroxyapatite," (Prelim Resp. 50; Ex. 1001, 16:60–67), but there is nothing in the claim language to suggest that any particular surface treatment is required. Patent Owner has not pointed to any other indication in the '977 patent that a "surface configured to be in contact with bone" is one that necessarily has been treated to enhance osseointegration. Instead, the limitation simply precludes use of those materials not suitable to be in contact with bone. Moreover, we are not confined to any claim constructions agreed upon by the parties in the ITC proceeding, which were not necessarily premised upon the broadest reasonable interpretation standard applicable to an *inter partes* review.

4. Remaining Claim Terms

We determine that no explicit construction of any other claim term is necessary to determine whether to institute a trial in this case. *See, e.g.*, *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) ("[C]laim terms need only be construed 'to the extent necessary to resolve the controversy.") (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). At this stage of the proceeding, we have not made a final determination as to the construction of any claim term.

B. Public Accessibility of Prior Art Relied Upon in Petition

As a threshold matter, we must determine whether the references that Petitioner relies upon in its challenges were publicly accessible before the critical date of May 2003, thereby qualifying as prior art "printed publications."

To qualify as a "printed publication" within the meaning of § 102(b), a reference "must have been sufficiently accessible to the public interested in the art" before the critical date. *In re Cronyn*, 890 F.2d 1158, 1160 (Fed. Cir. 1989). Whether a reference is publicly accessible is determined on a case-by-case basis based on the "facts and circumstances surrounding the reference's disclosure to members of the public." *In re Lister*, 583 F.3d 1307, 1311 (Fed. Cir. 2009) (quoting *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004)). "A reference is considered publicly accessible if it was 'disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art[,] exercising reasonable diligence, can locate it.'" *Id.* (quoting *Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008)); *see also In re Hall*, 781 F.2d 897, 898–900 (Fed. Cir. 1986) (holding that a dissertation

shelved in the stacks and indexed in the catalog at a university library was a printed publication); *In re Bayer*, 568 F.2d 1357, 1362 (CCPA 1978) (holding that a thesis deposited in a university library where it remained "uncatalogued and unshelved" before the critical date, was not sufficiently accessible to qualify as a printed publication); *Cronyn*, 890 F.2d at 1161 (holding that three theses filed in college libraries were not sufficiently accessible to the public, even though "the titles of the theses were listed on . . . cards filed alphabetically by author in a shoebox in the chemistry department library.").

Under the "reasonable likelihood" standard for institution of an *inter partes* review, we have, in some circumstances, required a "threshold showing" of public accessibility of prior art references. *See, e.g.*, *Apple, Inc. v. DSS Tech. Mgmt., Inc.*, Case IPR2015-00369, slip op. at 5 (PTAB Aug. 12, 2015) (Paper 14) (denying institution because "an uncorroborated archive date stamp unsupported by evidence linking archiving with public accessibility is insufficient to establish a threshold showing for printed publication status."); *Actavis, Inc. v. Research Corp. Techs., Inc.*, Case IPR2014-01126, slip op. at 10–13 (PTAB Jan. 9, 2015) (Paper 21) (denying institution because Petitioner had not provided any competent evidence to show a thesis was accessed by the public prior to the critical date).

1. ABT Catalog (Ex. 1008).

The Alpha Bio Tech Ltd. ("ABT") Catalog is a product catalog that describes, *inter alia*, 5 mm and 6 mm SPI dental implants with a tapered or beveled coronal region. Ex. 1008, 15–16. The ABT Catalog is entitled "Product Catalog March 2003," and includes a 2003 copyright designation.

Id. at 1, 57. A 5 mm SPI dental implant from the ABT Catalog is reproduced below:

Id. at 15. As shown above, the 5 mm SPI dental implant comprises, *inter alia*, a threaded apical region, a coronal region that is tapered or beveled, and a bone tap.

Although the document itself bears a date of "March 2003" on its front cover, Patent Owner contends that Petitioner has not made the requisite showing of public accessibility for the ABT Catalog prior to the critical date of May 2003. Prelim. Resp. 15–21.

Petitioner relies on the deposition testimony of Ophir Fromovich, one of the co-inventors of the '977 patent, to assert that copies of the ABT Catalog were printed and handed out as a "training aid" during courses given to other dentists who were potential customers. Pet. 19–20 (citing Ex. 1021, 123:20–124:5, 124:22–127:2, 131:23–134:18). As further evidence, Petitioner submits that the ABT advertisement in the Jan.–Feb. 2003 Update Journal (Ex. 1009) includes a picture and description of the SPI Implants identical to those described in the ABT Catalog. Pet. 20 (citing Ex. 1008, 16). Further, Petitioner relies on the ITC matter, in which the ITC's Office of Unfair Import Investigations ("Staff") concluded that public accessibility was shown based, in part, on the 2003 copyright date of the ABT Catalog.

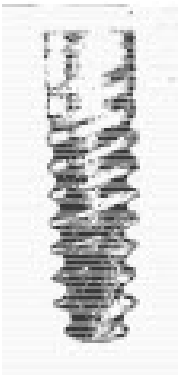
Id. at 20–21 (citing Ex. 1005, 45). Lastly, Petitioner argues that an Information Disclosure Statement (IDS) submitted during prosecution indicating that the ABT Catalog should be "consider[ed] published before May 21, 2003" constitutes an admission by the Patent Owner that the catalog is, in fact, prior art. *Id.* at 21 (citing Ex. 1002, 196).

Based on the record at this stage of the proceeding, we conclude that Petitioner has made the requisite showing of public accessibility for the ABT Catalog for purposes of considering the reference for this Institution Decision. We find that product catalogs, like the ABT Catalog, are the type of documents normally intended for public dissemination. Moreover, there is nothing in the document itself indicating that Exhibit 1008 was merely a draft or that it was intended to be kept confidential. The dispute, however, concerns whether the ABT Catalog was available and publicly disseminated as of the May 2003 critical date of the '977 patent. Dr. Fromovich did not recall during his deposition exactly when he held courses in which the ABT Catalog was used as a teaching aid, but he nonetheless testified that it was possible that hundreds of copies (i.e., anywhere from 200 to 500) were printed and distributed to customers during the "many courses" that were held around that time. Ex. 1021, 125:23–126:8, 126:23–127:2, 133:14–134:18. On the other hand, Dr. Fromovich also testified that he was not certain whether the ABT Catalog was printed in March 2003, or several months afterwards. *Id.* at 126:3–8. Thus, although we recognize that the evidence relied upon by Petitioner has some inconsistencies that require

addressing during trial,[8] we find Petitioner has made a sufficient "threshold showing," at least for purposes of institution.

2. Update Journal (Ex. 1009).

The Israeli Dental Update Journal No. 63 for January–February 2003 is a Hebrew-language trade journal that includes an advertisement for an ABT SPI conical implant having a dual thread with a thread height of 2.1 mm. Ex. 1009, 2–3; Ex. 1010 (certified English translation). The copy submitted with the Petition includes a "Received" stamp of March 6, 2003. Ex. 1009, 3; Ex. 1010, 4. The advertised SPI conical implant is reproduced below. Ex. 1009, 3.



The SPI conical implant shown above comprises, *inter alia,* a threaded apical region, a coronal region, and a bone tap.

[8] Other evidence relied upon by Petitioner, while probative, is also not conclusive on this issue. The "Copyright © 2003" designation on the ABT Catalog, even if considered evidence of publication sometime in 2003, does not necessarily support public accessibility prior to the critical date of *May* 2003. Ex. 1008, 57. The fact that the ABT Catalog was listed in an IDS is also not an admission that it qualifies as prior art, especially where applicants indicated that "inclusion on this list is not an admission that the cited document is prior art." Ex. 1002, 200. Finally, the SPI implant advertised in the Jan.–Feb. 2003 Update Journal appears to be different from the 5 mm SPI implant in the ABT Catalog that Petitioners rely upon for their anticipation challenge. *Compare* Ex. 1008, 16 *with* Ex. 1009, 2.

Patent Owner does not contest that the Update Journal was publicly accessible prior to the critical date. At this stage of the proceeding, based on the date of the journal publication and the "Received" stamp date, we determine that Petitioner has made a sufficient showing that this reference qualifies as prior art.

3. Anthogyr Catalog (Ex. 1014).

The Anthogyr Catalog includes a "January 2002" notation on its last page. Ex. 1014, 40. The Anthogyr Catalog discloses a 5 mm "Octagon" dental implant, comprising a spiral thread, a tapered coronal region, a flat apical end, and axially extending flutes that form a bone tap. *Id.* at 16. The 5mm "Octagon" dental implant from the 2002 Anthogyr Catalog is reproduced below:

Id. at 16. As depicted above, the dental implant includes a threaded portion and a beveled edge in the coronal region above the threads. Additionally, the Anthogyr Catalog indicates that the 5 mm implant may be used either with a "classical base" or a "wide base," as depicted below:

Id. As shown above, when the "classical base" abutment is attached to the implant, the abutment does not cover the coronal region.

To establish the public accessibility of the Anthogyr Catalog, Petitioner submits a Declaration of Mr. Martin Vogt, an employee of Institute Straumann AG, which is a real-party-in-interest of Petitioner in this proceeding. Ex. 1015; Pet. 1. Mr. Vogt attests that, during his tenure at Institut Straumann since 1992, he and his colleagues "collected product literature, including manuals and marketing brochures, for Institut Straumann as well as competitors' products." *Id.* ¶ 3. Mr. Vogt further attests that he "recognize[s] [Exhibit 1014] as the 2002 Anthoguy Catalog," and that "[c]atalogs, including that shown in Exhibit 1014, are kept in an archive maintained by Institut Straumann at least since 2000." *Id.* ¶¶ 4–5.

Patent Owner contends that Petitioner has failed to establish that the Anthogyr Catalog qualifies as prior art because the Vogt Declaration never states when the catalog "was allegedly published and/or received by Institut Straumann" or "when it might have been publicly accessible." Prelim. Resp. 24.

Based on the evidence of record, we determine that Petitioner has made a sufficient showing that the Anthogyr Catalog qualifies as prior art

for purposes of considering the reference for this Institution Decision. At this stage of the proceeding, we find persuasive that the Anthogyr Catalog itself bears a date of January 2002, which is corroborated by the testimony of Mr. Vogt. Moreover, a product catalog is normally intended for public dissemination, and there is nothing in the document itself indicating that Ex. 1014 was merely a draft or that it was intended to be kept confidential. Although we recognize that the Declaration of Mr. Vogt can be construed as vague as to exactly when employees of Institut Straumann received and archived the Anthogyr Catalog, it nonetheless tends to support the fact that the Anthogyr Catalog was accessible to other competitors in the dental implant field. Furthermore, Patent Owner will have an opportunity to cross-examine Mr. Vogt during trial to test his credibility.

4. ITI Manual (Ex. 1016).

The ITI Manual is a German-language manual for a dental screw implant. Ex. 1016; Ex. 1017 (certified English Translation). The ITI Manual discloses dental implant kits used to support overdenture bars. The manual describes plasma-coated titanium screw implants, as depicted below:

Ex. 1017, 6. The image above shows standard 3.5 mm implants used for the prosthetic restoration process described in the ITI Manual. *Id.*

As evidence of public accessibility for this reference, Petitioner provides a second Declaration from Mr. Vogt, who attests that the implants described in the ITI Manual were "made and sold by Institut Straumann." Ex. 1019 ¶ 5. Mr. Vogt also attests that the ITI Manual was "published circa 1987" and "has been in my archive at least since 2000." *Id.* ¶ 4.

Patent Owner contends that "the Vogt declaration's bare statement that the ITI Manual was 'published circa 1987,' Ex. 1019 ¶ 4, is unsupported and vague," and "Mr. Vogt never provides any supporting evidence of when the alleged publication occurred, or testimony that the ITI Manual was in fact publicly disseminated to anyone." Prelim. Resp. 26. We agree that Petitioner has not demonstrated sufficiently the requisite public accessibility of this reference. Mr. Vogt does not identify any support for his statement that the ITI Manual was "published circa 1987." Ex. 1019 ¶ 4. Unlike the product catalogs discussed above, the manual itself does not bear any such date or other indicia that it was intended for distribution outside of Institut Straumann. Nor does Mr. Vogt's Declaration indicate that persons outside of Institut Straumann could have accessed the manual prior to May 2003 through the exercise of reasonable diligence. As noted by Patent Owner, "keeping a copy of an Institut Straumann manual in Institut Straumann's internal archive would hardly be public dissemination." Prelim. Resp. 26.

Petitioner, therefore, has not demonstrated sufficiently that the ITI Manual qualifies as a prior art printed publication.

C. Analysis of Petitioner's Patentability Challenges

1. Anticipation of Claims 1–5 and 19 by the ABT Catalog

Petitioner contends that claims 1–5 and 19 are anticipated by the ABT Catalog. Pet. 19–35. In addition to the teachings of the references, Petitioner also relies upon the Declaration of Michael M. Dard, DDS, MS, Ph.D in support of this challenge. Ex. 1007. Petitioner provides claim charts for each of the remaining challenged claims. Pet. 24–35.

Based on the record at this stage of the proceeding, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to this anticipation challenge. We have considered, but are not persuaded by, Patent Owner's preliminary arguments. As discussed above, we determine that Petitioner has demonstrated a reasonable likelihood that the ABT Catalog qualifies as a prior art printed publication. Patent Owner's other arguments are based primarily upon claim constructions that we have rejected.

In particular, with respect to claim 1, Patent Owner contends that "the 5 mm implant on which Petitioner relies is an implant with a generally cylindrical coronal region, not an implant whose coronal region as a whole has a frustoconical shape." Prelim. Resp. 51. As discussed above, our construction of claim 1 encompasses a coronal region that only partly has a frustoconical shape. Petitioner has identified the topmost portion of the 5 mm SPI implant shown in the ABT Catalog as the coronal region with the frustoconical shape. Pet. 25. Patent Owner also argues that Petitioner's claim charts also do not address the requirement in claim 1 that "the apical end of the core is substantially flat." Prelim. Resp. 40. We determine that Petitioner's inclusion of an image from the ABT Catalog with an apical end

that appears to be generally flat is a sufficient showing for purposes of institution.

With respect to claim 2, Patent Owner separately argues that "[t]here is no evidence that the small bevel [of the SPI implant] was designed or constructed to enhance osseointegration," and "[b]eing surrounded by bone is not enough to meet this limitation." *Id.* at 55. As discussed above, our construction of claim 2 does not require that the surface region of the coronal region be designed or constructed to enhance osseointegration. At this stage of the proceeding, we determine that Petitioner has made a sufficient showing that at least one surface of the coronal region of the implant is capable of being in contact with bone, which is all that is required by the plain and ordinary meaning of the claim.

Accordingly, we conclude that Petitioner has demonstrated a reasonable likelihood of establishing that claims 1–5 and 19 are anticipated by the ABT Catalog.

2. Obviousness of Claims 1–5, 19, and 20 Based on the Update Journal and the Anthogyr Catalog

Petitioner contends that claims 1–5, 19, and 20 are obvious based on the combination of the Update Journal and the Anthogyr Catalog. Pet. 36–53. In addition to the teachings of the references, Petitioner also relies upon the Declaration of Dr. Dard in support of this challenge. Ex. 1007. Petitioner provides claim charts for each of the remaining challenged claims. Pet. 40–43, 48–50.

Petitioner contends that a skilled artisan would have found it obvious to combine the threaded apical region of the implant disclosed in the Update Journal with the frustoconical coronal region of the 5 mm "Octagon"

implant disclosed in the Anthogyr Catalog. Pet. 40. Relying upon Dr. Dard's Declaration, Petitioner asserts that the skilled artisan "would have been motivated to combine a frustoconical coronal region on implant diameters of 5 mm and larger to provide a transition between the coronal end of the implant and the typical abutment base and to obtain the other expected benefits of that combination." *Id.* at 52 (citing Ex. 1007 ¶¶ 112–117). More specifically, Dr. Dard asserts that the skilled artisan would have recognized that "the inverse taper of the frustoconical coronal region will promote bone growth over the top coronal margin of the implant," which "will secure the implant within the jaw, provide a healthy surface for regrowth of the gingiva, and improve[] aesthetics by ensuring the coronal end of the implant is not visible around the base of the abutment." Ex. 1007 ¶ 113. Accordingly, Petitioner asserts that modifying the SPI implant of the Update Journal to include the frustoconical coronal region of Anthogyr would have been the mere substitution of one element for another known in the field, yielding predictable results. Pet. 52–53.

Based on the record at this stage of the proceeding, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to this obviousness challenge. We have considered, but are not persuaded by, Patent Owner's preliminary arguments. As discussed above, we determine that Petitioner has shown sufficiently for purposes of this Decision that both the Update Journal and Anthogyr Catalog qualify as prior art printed publications. Patent Owner's other arguments are based primarily upon claim constructions that we have rejected.

First, with respect to claim 1, Patent Owner contends that evidence at the ITC hearing demonstrated that "the Octagon implant shows only a small

mating bevel designed to contact and engage a wide-base abutment," and "the mating bevel is part of the implant's prosthetic platform, and not a coronal region." Prelim. Resp. 53. As discussed above, our construction of claim 1 encompasses a coronal region that only partly has a frustoconical shape. We find that Petitioner has shown sufficiently that this requirement is satisfied by the beveled portion of Anthogyr's implant. As with the anticipation challenge, Patent Owner argues that Petitioner's claim charts for this obviousness challenge do not address the requirement in claim 1 that "the apical end of the core is substantially flat." *Id.* at 40. We determine that Petitioner's inclusion of an image from the Update Journal with an apical end that appears to be generally flat is a sufficient showing for purposes of institution.

Second, with respect to claim 2, Patent Owner contends that "[t]he Anthogyr Catalog provides no disclosure that this small mating bevel is designed to contact bone, nor that if it were contacting bone the bevel's surface would enhance osseointegration as required by Claim 2." *Id.* at 56. As discussed above, our construction of claim 2 does not require that the surface region of the coronal region be designed or constructed to enhance osseointegration. At this stage of the proceeding, we determine that Petitioner has made a sufficient showing that at least one surface of the coronal region of the implant based on the combination of the Update Journal and Anthogyr Catalog would have been capable of being in contact with bone, which is all that is required by the ordinary and customary meaning of the claim. The fact that the region identified as the frustoconical shape in the Anthogyr implant may be covered by a "wide base" abutment does not require a different conclusion. As depicted in the Anthogyr

Catalog, the wide base abutment is not required, and use of the "classical base" would appear to allow for the coronal region to be in contact with bone after implantation. Ex. 1014, 16.

Patent Owner further asserts that secondary considerations evidence supports non-obviousness of the claims, including commercial success, copying by competitors, long-felt need, and industry praise and skepticism. Prelim. Resp. 31–37. Patent Owner argues that, because Petitioner never addresses secondary considerations relating to the '977 patent, an issue that was extensively litigated in the prior ITC proceeding, Petitioner's obviousness grounds should be denied. *Id*. at 37–38 (citing *Omron Oilfield & Marine, Inc. v. MD/Totco*, No. IPR2013-00265, slip op. at 12–16 (PTAB Oct. 31, 2013) (Paper 11, Decision to Institute) (non-precedential). Unlike in *Omron Oilfield*, however, the secondary considerations evidence presented at the ITC appears to have been confidential and subject to the ITC's protective order. *See, e.g.*, Ex. 2001, 70; Ex. 2002 (confidential witness statement of Joe Day regarding secondary considerations). Moreover, as we have previously recognized, the issue of secondary considerations is highly fact-specific. At this stage of the proceeding, the record regarding such secondary considerations is incomplete, and Petitioner has not had the ability to fully respond to the specific arguments raised by Patent Owner in the Preliminary Response.

Therefore, we conclude that Petitioner has demonstrated a reasonable likelihood of establishing that claims 1–5, 19, and 20 are obvious based on the Update Journal and the Anthogyr Catalog.

3. Obviousness of Claims 1–7, 19, and 20 Based on the Update Journal and the ITI Manual

Petitioner contends that claims 1–7, 19, and 20 are obvious based on the combination of the Update Journal and the ITI Manual. Pet. 53–60. Because we conclude that Petitioner has not demonstrated a reasonable likelihood of establishing that the ITI Manual qualifies as a prior art printed publication, we decline to institute trial based on this obviousness challenge.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated that the information presented in the Petition and in the Preliminary Response shows that there is a reasonable likelihood that it would prevail in proving the unpatentability of claims 1–5 and 19 of the '977 patent for anticipation and claims 1–5, 19, and 20 of the '977 patent for obviousness.

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

IV. ORDER

Accordingly, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to claims 1–5, 19, and 20 of U.S. Patent No. 8,714,977 based on the following grounds of unpatentability:

A. Claims 1–5 and 19 under 35 U.S.C. § 102(b) as anticipated by the ABT Catalog; and

B. Claims 1–5, 19, and 20 under 35 U.S.C. § 103(a) as obvious over the combination of the Update Journal and the Anthogyr Catalog;

FURTHER ORDERED that *inter partes* review commences on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; and

FURTHER ORDERED that the trial is limited to the grounds of unpatentability listed above, and no other grounds of unpatentability are authorized for *inter partes* review.

PETITIONER:

Paul S. Hunter
Nicola A. Pisano
Andrew R. Cheslock
FOLEY & LARDNER LLP
phunter@foley.com
npisano@foley.com
acheslock@foley.com

PATENT OWNER:

Michelle E. Armond
John B. Sganga, Jr.
Rabinder N. Narula
Sheila N. Swaroop
KNOBBE, MARTENS, OLSON & BEAR, LLP
2mea@knobbe.com
2jbs@knobbe.com
2rnn@knobbe.com
2sns@knobbe.com