

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SMITH & NEPHEW, INC.,  
WRIGHT MEDICAL GROUP, INC., and  
WRIGHT MEDICAL TECHNOLOGY, INC.,  
Petitioners,

v.

BONUTTI SKELETAL INNOVATIONS LLC,  
Patent Owner.

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Case IPR2013-00629  
Patent 7,806,896 B1

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Before WILLIAM V. SAINDON, MICHAEL R. ZECHE, and  
RICHARD E. RICE, *Administrative Patent Judges*.

SAINDON, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

## I. INTRODUCTION

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a).

With respect to the asserted grounds in this trial, we have considered the positions set forth by Petitioners and Patent Owner in the Petition, Patent Owner's Response, Petitioners' Reply, and the evidence cited therein. For the reasons discussed below, we determine that Petitioners have shown, by a preponderance of the evidence, that claim 1 of the '896 patent is unpatentable.

### *A. Procedural History*

Smith & Nephew, Inc., filed a Petition requesting an *inter partes* review (Paper 3, "Pet.") of claims 1 and 13 of U.S. Patent No. 7,806,896 B1 (Ex. 1001, "the '896 patent"). Pet. 2. Smith & Nephew included a Declaration of Dr. Jay Mabrey, M.D. (Ex. 1002). In our Decision to Institute *Inter Partes* Review (Paper 10, "Inst. Dec."), we instituted a trial only as to claim 1 of the '896 patent on four grounds. Inst. Dec. 27.

In another proceeding, Wright Medical Group, Inc. and Wright Medical Technology, Inc., filed a Petition requesting an *inter partes* review of claims 1 and 40 of the '896 patent, which we granted. IPR2014-00354, Paper 10. Subsequently, Bonutti Skeletal Innovations LLC ("Patent Owner") filed a notice disclaiming claim 40 of the '896 patent. IPR2014-00354, Paper 12.

On June 30, 2014, we issued a decision granting the parties' joint motion for joinder of Case IPR2013-00629 with Case IPR2014-00354. IPR2013-00629, Paper 18; IPR2014-00354, Paper 14.

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Patent Owner filed a Response addressing the asserted grounds (Paper 17, “PO Resp.”) with a Declaration of Dr. Scott D. Schoifet, M.D. (Ex. 2004). Smith & Nephew, Wright Medical Group, and Wright Medical Technology (collectively, “Petitioners”) then filed a Reply to Patent Owner’s Response (Paper 22, “Pet. Reply”) with a Reply Declaration of Dr. Mabrey (Ex. 1023).

An oral hearing was held on October 27, 2014, with all parties present. Paper 30 (“Tr.”).

No motions are outstanding.

#### *B. Related Proceedings*

Patent Owner identifies that an *inter partes* review has been instituted against the ’896 patent in *Zimmer Holdings, Inc. v. Bonutti Skeletal Innovations LLC*, IPR2014-00321 (PTAB June 2, 2014) (Paper 13) (trial instituted on claims 40–42 and 44–47 of the ’896 patent). Paper 9.

The ’896 patent is involved in several district court actions: *Bonutti Skeletal Innovations LLC v. Smith & Nephew, Inc.*, Civil Action No. 12-1111-GMS (D. Del.); *Bonutti Skeletal Innovations LLC v. Zimmer Holdings Inc.*, Civil Action No. 1:2012-cv-01107 (D. Del.); *Bonutti Skeletal Innovations LLC v. Wright Medical Group Inc.*, Civil Action No. 1:2012-cv-01110 (D. Del. 2012); *Bonutti Skeletal Innovations LLC v. ConforMIS Inc.*, Civil Action No. 1:2012-cv-01109 (D. Del.); *Biomet Inc v. Bonutti Skeletal Innovations LLC*, Civil Action No. 3:2013-cv-00176 (N.D. Ind.); and *Bonutti Skeletal Innovations v. DePuy Mitek, Inc.*, Civil Action No. 1:2012-cv-11667 (D. Mass). Pet. 1; Paper 8, 2.

### *C. Technical Background*

The human knee joint is formed by the lower (distal) end of the femur (thighbone) and the upper (proximal) end of the tibia (shinbone), with the patella (kneecap) covering the joint. Ex. 1002 ¶ 25. The distal end of the femur includes two rounded protrusions called condyles; the groove between them is known as the femoral groove, patellar groove, or trochlear groove. *Id.* The condyles glide on a piece of cartilage on top of the tibia to form the main load-bearing interface of the knee joint. *Id.* ¶¶ 23, 25.

In general, knee replacement surgery involves removal of one or more portions of the knee's bones and replacing them with artificial analogues. The process typically follows this procedure: exposing the knee by making an incision through the skin (*id.* ¶ 29), inserting one or more cutting guides (*id.* ¶¶ 32–35), resurfacing one or more bones (*id.*), and attaching the replacement portions (*id.* ¶ 36, noting the replacement also is called an implant). *See also* Pet. 9–13 (discussing knee replacement surgery).

“Accurate alignment of knee implants is essential for the success of total knee replacement.” Ex. 1003, 49 (emphasis removed). Mechanical alignment guides typically are used “to assure that cutting guides were properly aligned with the leg when placed on the bone.” Ex. 1002 ¶ 34; *see also* Ex. 1001, 17:16–18 (disclosing that intramedullary instrumentation is used to cut a femur). These mechanical device guides often come in the form of a rod that is secured to the patient. Installation of the rod can be either intramedullary, wherein the rod is inserted into the medullary canal (bone marrow cavity) of the tibia, or extramedullary, wherein the rod is attached to the patient's leg. Ex. 1002 ¶ 34; Ex. 1001, 17:16–18 (“either . . . can be utilized”). Figures 10 and 11 of Stulberg (Ex. 1005) depict

intramedullary and extramedullary rods, respectively, and are reproduced below:

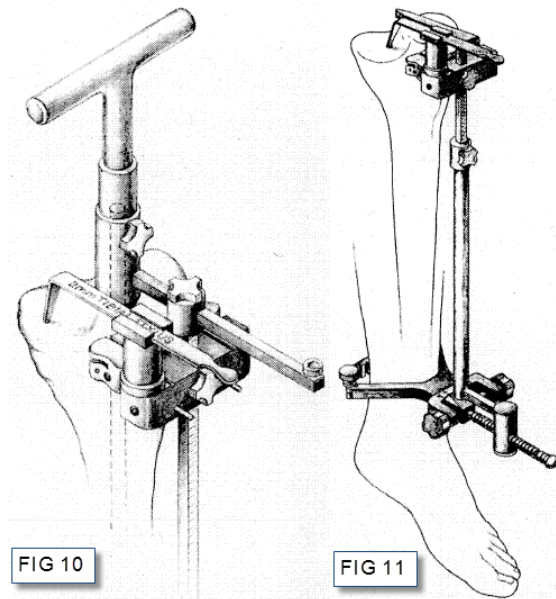


Figure 10 depicts a cutting guide secured to a patient using an intramedullary rod inserted into the medullary canal of the tibia. Ex. 1002 ¶ 34. Figure 11 depicts a cutting guide secured to a patient using an extramedullary rod strapped to the patient's ankle. *Id.*

#### *D. The '896 Patent*

The '896 patent, titled "KNEE ARTHROPLASTY METHOD," issued October 5, 2010 from U.S. Patent Application No. 10/722,102, filed November 25, 2003. Ex. 1001 at [54], [45], [21], and [22]. The '896 patent is a continuation of U.S. Patent Application No. 10/191,751, filed July 8, 2002, now U.S. Patent No. 7,104,996, and is a continuation-in-part of a number of earlier-filed applications. *Id.* at [63].

The '896 patent discusses methods for performing knee replacement surgery. Particularly, the '896 patent discusses alignment systems that do not use intramedullary and/or extramedullary rods. Such alternative

alignment systems are described as including percutaneous mounting (exterior mounting, through the skin), and the use of computer imaging devices. Ex. 1001, 38:9–12 (percutaneous mount), 36:55–62, 72:7 *et seq.* (computer imaging). Claim 1 specifies that the position of the cutting guide is determined “using references derived independently from an intramedullary device,” and that the cutting guide is secured to the bone “free of an extramedullary or intramedullary alignment rod.” *Id.* at 112:63–64, 113:1–2.

The ’896 patent also highlights the importance of smaller incisions, “[t]he benefits of [which] include improved cosmetic results, improved rehab, less dissection of muscle and soft tissue, and preservation of the quadriceps mechanism.” *Id.* at 15:15–18. In order to have smaller incisions, smaller instruments must be used. *Id.* at 17:48–59. Claim 1 specifies that the “replacement portion [of the knee] ha[s] a transverse dimension that is larger than a transverse dimension of the [cutting] guide surface.” *Id.* at 113:8–10.

#### *E. The Challenged Claim*

Claim 1 is the only remaining claim challenged.

1. A method of replacing at least a portion of a patient’s knee, the method comprising the steps of:
  - making an incision in a knee portion of a leg of the patient;
  - determining a position of a cutting guide using references derived independently from an intramedullary device;
  - positioning a cutting guide using the determined position, passing the cutting guide through the incision and on a surface of a distal end portion of an unresected femur, the cutting guide

secured to the bone free of an extramedullary or intramedullary alignment rod;  
moving a cutting tool through the incision into engagement with a guide surface on the cutting guide; and  
forming at least an initial cut on the femur by moving the cutting tool along the guide surface;  
attaching a replacement portion of the knee to the cut surface, the replacement portion having a transverse dimension that is larger than a transverse dimension of the guide surface.

Ex. 1001, 112:60–113:10.

*F. The Instituted Grounds*

The following grounds asserted by Petitioners were instituted in this proceeding (Inst. Dec. 27):

References	Basis	Claim Challenged
Delp <sup>1</sup> and either Turner <sup>2</sup> or Scorpio <sup>3</sup>	§ 103	1
Stulberg <sup>4</sup> and either Turner or Scorpio	§ 103	1

<sup>1</sup> Scott L. Delp, *et al.*, *Computer Assisted Knee Replacement*, 354 CLINICAL ORTHOPAEDICS AND RELATED RESEARCH 49–56 (1998) (“Delp Article”) (Ex. 1003).

<sup>2</sup> Roderick H. Turner, *et al.*, *Geometric and Anametric Total Knee Replacement*, in TOTAL KNEE REPLACEMENT 171–93 (A.A. Savastano, M.D. ed. 1980) (“Turner”) (Ex. 1008).

<sup>3</sup> Stryker Howmedica Osteonics, *Scorpio Single Axis Total Knee System – Passport Total A.R. Total Knee Instruments – Passport A.R. Surgical Technique* (May 2000) (“Scorpio”) (Ex. 1009).

<sup>4</sup> S. David Stulberg, *et al.*, *Computer-Assisted Total Knee Replacement Arthroplasty*,” 10(1) OPERATIVE TECHNIQUES IN ORTHOPAEDICS 25–39 (Jan. 2000) (“Stulberg”) (Ex. 1005).

## II. ANALYSIS

### A. Claim Construction

We interpret the claims of an unexpired patent using the broadest reasonable interpretation in light of the specification of the patent. 37 C.F.R. § 42.100(b). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech. Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Further, “the specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal.” *GE Lighting Solutions, LLC v. Agilight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (citing *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). The standards for lexicography and disavowal are exacting, and require clear intent to define or narrow a term. *Thorner*, 669 F.3d at 1365–66. Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In our Decision to Institute, we adopted Petitioners’ proposed constructions. Inst. Dec. 9.<sup>5</sup> Neither party argues that these terms, or any other terms, require further construction. Accordingly, we maintain the following constructions:

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<sup>5</sup> We refer only to the Decision to Institute and Petition filed in IPR2013-00629 in this Decision. The Decision to Institute and Petition filed in IPR2014-00354 are similar to those in IPR2013-00629, such that we need not refer to those.



Term	Adopted Construction
“cutting guide”	“guide that has a guide surface”
“guide surface”	“a surface that guides a cutting instrument”

The term “a transverse dimension of the guide surface” appears in claim 1. Ex. 1001, 113:8–9. This term was not construed in our Decision to Institute, and neither party offers a construction of the term. We construe the term for this Decision, however, because an issue now requires us to consider what is “a transverse dimension of the guide surface.”

The '896 patent does not define the term “transverse dimension” as it relates to the guide surface. The '896 patent discusses the term “transverse dimension” as it relates to a *cutting guide* making an anterior resection, but it does not speak to the *guide surface*. Ex. 1001, 17:48–59. The guide surface of the cutting guide discussed in this passage is shown in Figure 13 to have a roughly trapezoidal planar shape. Figures 11 and 13 of the '896 patent are reproduced below:

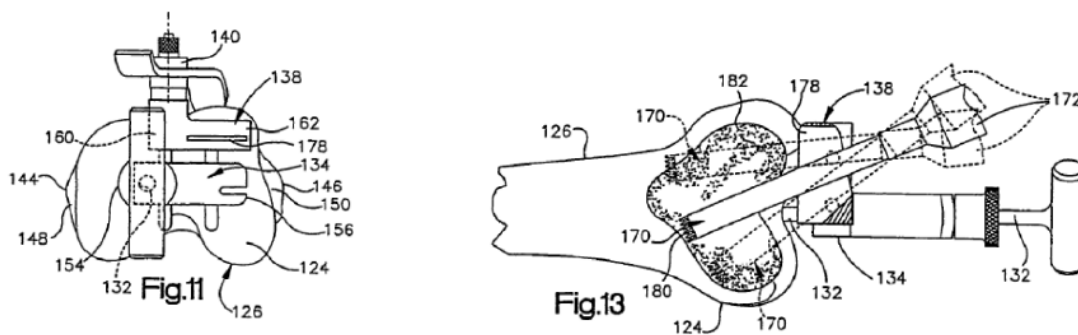


Figure 11 of the '896 patent depicts a view of cutting guide 138 along the femoral axis. Guide surface 178 is described as a slot on cutting guide 138. *Id.* at 21:44–45 (“anterior resection guide 138 has a slot which forms the

guide surface 178”).<sup>6</sup> Figure 13 depicts a top-down cross section of cutting guide 138 along a plane of guide surface 178. As can be seen in Figure 13, guide surface 178 is a roughly trapezoidal planar shape, and the width of guide surface 178 where saw blade 170 enters cutting guide 138 (“physician side”) is narrower than the portion of guide surface 178 where saw blade 170 leaves cutting guide 138 (“bone side”).<sup>7</sup> Likewise, Figure 13 shows the coaxial dimension of guide surface 178 (i.e., the dimension in a direction coaxial to the femoral axis) is smaller on the side closer to the midline of the femur than on the medial side due to a triangular portion of the cutting guide.

Patent Owner recognizes that Figure 13 of the ’896 patent depicts the width of guide surface 178 on the physician side to be smaller than the width of guide surface 178 on the bone side. *See* PO Resp. 39–40. Patent Owner argues, however, that the ’896 patent equates the width of guide surface 178 (and thus, presumably, “a transverse dimension of the guide surface”) to be the width of cutting guide 138. Specifically, Patent Owner argues, “the specification describes the cutting guide of Figures 11 and 13 as having a single guide surface 178 extending across the entire cutting guide 138 notwithstanding the fact that the slot extends across only a part of the handle side of the cutting guide 138 (’896 patent, Col. 20, ll. 15-46).” PO Resp. 39. Patent Owner does not explain, however, how the cited passage supports its

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<sup>6</sup> The terms “guide surface” and “cutting guide” are not used in the specification of the ’896 patent at these passages to describe items 138 and 178, but we identify the structures in the same manner as Patent Owner. PO Resp. 39.

<sup>7</sup> The width of the cutting guide corresponds to a “transverse dimension” because it is “in a direction perpendicular to the longitudinal central axis of the femur.” Ex. 1001, 17:58–59; Tr. 13:5–8, 25:114.

position. Upon reviewing this passage, we find it discusses guide surface 178 and cutting guide 134 in relation to the bone, but never to each other. Accordingly, we discern no portion of this passage that is a clear intent to limit “a transverse dimension of the guide surface” to mean the transverse dimension of the cutting guide. *See Thorner*, 669 F.3d at 1365–66.

Likewise, we discern no portion of this passage that is a clear intent to limit “a transverse dimension of the guide surface” to be any particular transverse dimension of the guide surface. *See id.*

Because the ’896 patent does not limit which particular transverse dimension of the guide surface one must measure to determine “a transverse dimension of the guide surface,” and the guide surface has at least two apparent transverse dimensions to measure (physician- and bone-side edges), we determine that the broadest reasonable interpretation of “a transverse dimension of the guide surface” is any measure of a transverse dimension of the guide surface. *See Ex. 1002 ¶ 70* (Dr. Mabrey demarcates the extent of the transverse dimension of the guide surface as measured at the physician-side edge of the guide surface)

Having construed the claim terms or phrases that are necessary to resolve the issues raised by the parties, we now turn to the asserted grounds.

### *B. The Stulberg-Scorpio Ground*

We first discuss the prior art used in Petitioners’ ground. Then we discuss the ground itself, the issues raised in Patent Owner’s arguments, and, finally, we present our analysis.

*1. Stulberg*

Stulberg describes a method of replacing at least a portion of a patient's knee, including the steps of making an incision, positioning a cutting guide, and using the cutting guide to guide a cutting tool to form a cut. *See* Ex. 1005, Fig. 2 (depicting the incision), Fig. 16B (depicting a cutting guide on a femur), Fig. 19B (depicting cuts), Fig. 20A (depicting a trial implant); *see also* Ex. 1002 ¶¶ 29–41 (describing a typical knee replacement surgery); Pet. 43–47.

Stulberg teaches that successful knee replacement surgery is driven by proper alignment of the replacements. Ex. 1005, 25. To that end, Stulberg discusses and contrasts computer-assisted total knee replacement arthroplasty with conventional, mechanically-assisted arthroplasty. *Id.* Stulberg states that the computer-assisted method “improve[s] the accuracy of the surgical technique.” *Id.* In the computer-assisted method, the surgeon uses the computer to align a cutting block over the bone, and then secures the cutting block using a wire. *Id.* at 30, Fig. 16. A cutting guide is attached, then the cuts are made and the replacement is fitted and tested. *Id.* at 32, Fig. 17.

Stulberg contrasts the mechanical and computer-assisted techniques with respect to femoral cuts in further detail. Stulberg states that the mechanical technique uses an intramedullary rod; the rod is depicted in Figure 15, reproduced below:

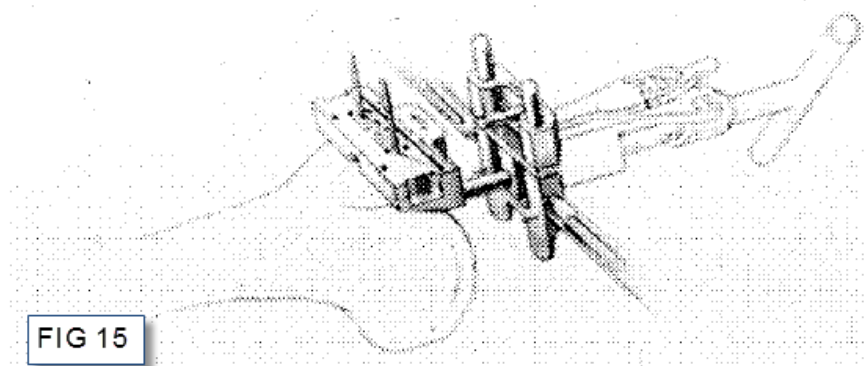


Figure 15 of Stulberg depicts an intramedullary rod (ghosted), introduced into the femoral medullary canal to secure the distal femoral cutting block. *Id.* at 35.

To contrast the mechanical technique, Stulberg presents Figure 16B, showing the cutting block used in the computer-assisted technique, reproduced below:

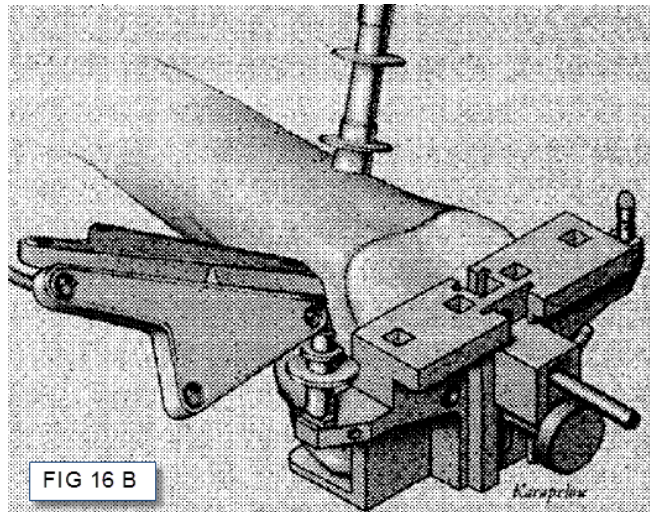


Figure 16B of Stulberg depicts the distal femoral cutting block placed in the sagittal (front-rear) plane during the computer-assisted technique. *Id.* at 35. Figure 16B does not depict, nor does the accompanying text describe, an intramedullary or extramedullary rod; however, Figure 16B depicts the use of rigid bodies attached to the femur and the cutting block, which are tracked

by a computer. *Id.* at 30. The cutting block is secured by threaded wire to the femur. *Id.*

## 2. *Scorpio*

The Scorpio reference provides instructions for surgeons installing the “*Scorpio*<sup>®</sup> Total Knee” replacement (Ex. 1009, 2) using the “Passport A/R” surgical technique and tools (*id.* at 1). *See also id.* at 48–49 (providing various product limitations and warnings). Of importance to the discussion in this Decision, Scorpio discloses an anterior (frontal) femoral resection (cutting) guide. *Id.* at 9. After installing a femoral alignment guide onto the distal end of the femur (*see id.* at 4–8), the anterior resection guide is inserted on top of the femoral alignment guide (*id.* at 9–11). Figure 15 of Scorpio, which is reproduced below with annotations added, depicts the anterior resection guide placed on the femoral alignment guide.

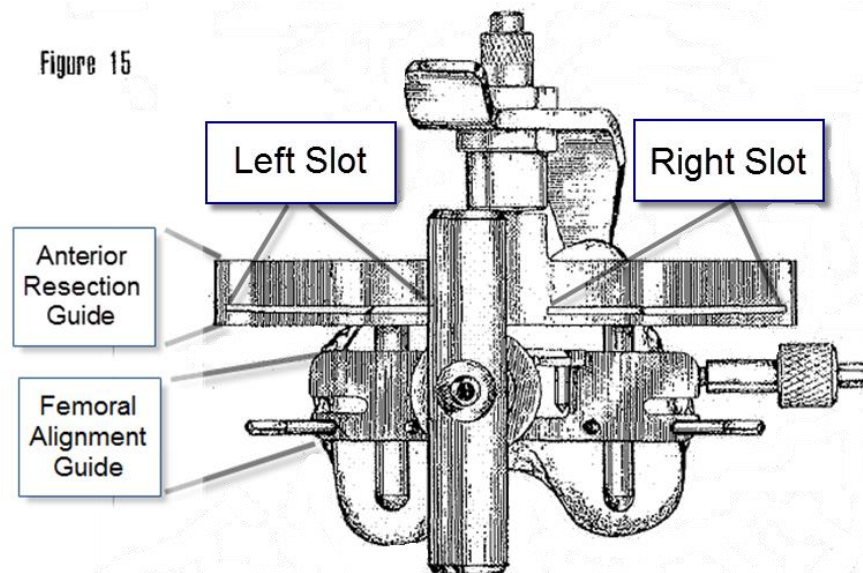


Figure 15 of Scorpio depicts an anterior resection guide having two laterally spaced cutting guide slots, the guide seated atop a femoral alignment guide

attached to the distal end of the femur. *See also id.* at Fig. 17 (depicting a saw inserted into one cutting guide slot).

### 3. *Petitioners' Proposed Combination*

Petitioners assert that Stulberg teaches every limitation of claim 1 except for the limitation, “the replacement portion having a transverse dimension that is larger than a transverse dimension of the guide surface.” Pet. 43–47; *see also* Inst. Dec. 14–19 (determining Petitioner Smith & Nephew had established a reasonable likelihood of showing the subject matter of claim 1 obvious on this ground). Petitioners assert that each of the two resection guide slots in Scorpio is a guide surface, and they are each smaller than the replacement portion. Pet. 33–34, 45–46. Petitioners further assert that a person of ordinary skill in the art would “follow the teachings of Stulberg that computer-assisted surgery can overcome the deficiencies of standard mechanical measuring techniques,” specifically the mechanical instrument in Scorpio. *Id.* at 45–46; *see also* Pet. Reply 11 (“A person of ordinary skill therefore would have been motivated to reduce trauma by eliminating mechanical alignment, as taught in . . . Stulberg, combined with smaller guide surfaces, as shown in . . . Scorpio.”); Ex. 1023 ¶ 43. Petitioners reason this would improve the accuracy of Scorpio (Pet. Reply 8), and is “the predictable use of prior art technology according to its established function to achieve a predictable result” (Pet. at 46 (citing Ex. 1002 ¶ 92)).

### 4. *Issues*

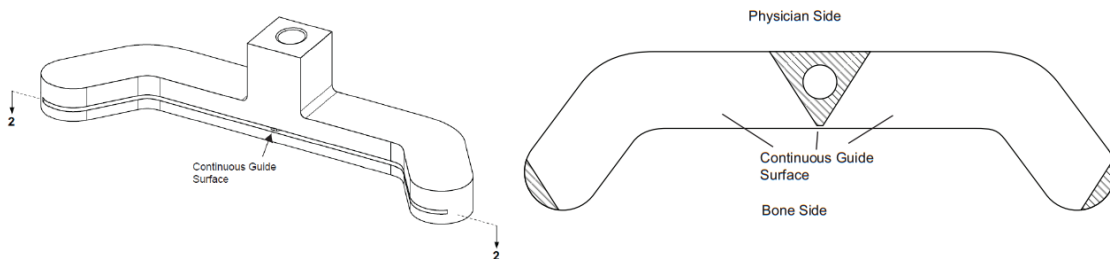
Patent Owner makes two principal arguments. First, Patent Owner argues that the two slots of Scorpio are actually part of the same guide

surface, such that their combined width is greater than the replacement portion. PO Resp. 20, 35–40. Second, Patent Owner argues that there is no reason to combine the references. *Id.* at 32–35, 40–45. We address each argument in turn.

### 5. *Scorpio's Guide Surface*

Patent Owner does not dispute Petitioners' assertion that Figure 15 of Scorpio depicts two slots within which a cutting blade may enter. Patent Owner disputes that those two slots should be considered two separate guide surfaces, and argues that Scorpio only discloses one guide surface. PO Resp. 20, 35–40. In support of this position, Patent Owner offers evidence, outside of the Scorpio reference itself, that the cutting guide of the product described in the Scorpio reference allegedly has a small passage that connects the left and right slots, such that they are both part of the same guide surface. Ex. 2004 ¶ 59. Patent Owner's declarant, Dr. Schoifet, testifies that he is in possession of such a Scorpio-branded resection guide. *Id.*

Patent Owner offers the following schematics showing the small passage of Dr. Schoifet's Scorpio-branded guide:



PO Resp. 20. Reproduced above on the left is a perspective drawing of a Scorpio-branded resection guide, allegedly depicting the slots of Scorpio from the bone side of the guide. Reproduced above on the right is a top-



down cross-section drawing of the Scorpio-branded anterior resection guide as sectioned along line 2 (at the slots) of the drawing on the left. This drawing reveals a triangular portion between the two slots of the guide. Patent Owner's position is that the apex of the triangle is truncated, such that there is a small passage that joins the two slots, making them both part of the same guide surface. PO Reply 20, 35–40.<sup>8</sup>

Petitioners respond that the proper inquiry is what the Scorpio reference discloses, not any given Scorpio-branded product. Pet. Reply 5. We agree. *See, e.g., In re Boe*, 355 F.2d 961, 965 (CCPA 1966) (cited in *In re Inland Steel Co.*, 265 F.3d 1354 (Fed. Cir. 2001) (holding that a reference must be evaluated for all that it teaches one of ordinary skill in the art)).<sup>9</sup> Notably, Petitioners do not rely on a theory of inherency in their Petition. *See* Pet. 43–47; Tr. 11:7–12 (“we don’t rely on inherency at all for Scorpio”). Further, we find that Patent Owner has not met a threshold showing that the features of the Scorpio-branded product (*see, e.g., Ex. 2007*) are inherent to the Scorpio reference, or would have been understood by one of ordinary skill in the art to be disclosed by the Scorpio reference. Patent Owner merely offers the testimony of Dr. Schoifet that the particular Scorpio-branded guide having the small passage is a “Scorpio Anterior Resection Guide that [he] used in 2003.” Ex. 2004 ¶ 59. There is a three-year timespan between the publishing date of Scorpio reference (2000) and

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<sup>8</sup> Although Patent Owner does not discuss how big this passage is, Petitioners’ expert, Dr. Mabrey, measures it to be about 1 mm wide by 0.5 mm deep. Ex. 1023 ¶ 14.

<sup>9</sup> In other words, if it can be shown that a reference would have led a person of ordinary skill in the art to believe a product had feature X, then that reference teaches feature X even if it can be shown, by other evidence in a different reference, that the product in fact had feature X’.

Dr. Schoifet's use of a Scorpio-branded product (2003). Further, Patent Owner does not offer when Dr. Schoifet obtained the Scorpio-branded product, or when it was made. Lastly, a trademark identifies the source of goods, rather than the good itself, such that the mere circumstance that the prior art reference and the product share the "Scorpio" trade name is insufficient to conclude they are the same. In view of these factors, Patent Owner has not made a sufficient showing that the Scorpio-branded product Dr. Schoifet discusses is the same thing as, or understood to be included in, the Scorpio reference.

Accordingly, we look to determine what a person of ordinary skill in the art, reviewing the Scorpio reference, would have understood regarding the extent and quantity of guide surfaces. As we stated above, Petitioners assert that Scorpio's two slots are two small guide surfaces. Patent Owner argues, essentially, that the two slots of Scorpio are part of the same "continuous guide surface." PO Resp. 19–21, 36–39. Patent Owner, relying on the testimony of Dr. Schoifet, argues that, if the two slots of Scorpio were not connected on the bone side of the guide, "the cutting guide could not make the anterior skim cut" and that Scorpio guide would be "inoperable for making the cut described." *Id.* at 36–39 (citing Ex. 2004 ¶ 77). Patent Owner's argument here is misplaced. The issue is not whether the slots are connected in some location, but rather whether *a transverse dimension* of a guide surface is smaller than a replacement portion. *Boe*, 355 F.2d at 965. As to this inquiry, the evidence before us supports Petitioners' position.

Petitioners rely on the testimony of Dr. Mabrey, who testifies that one of ordinary skill in the art, upon reviewing Figure 15 of Scorpio, would consider it to show two slots, each offering a guide surface for a different

cut, i.e., the surgeon would have to remove the cutting blade from a first slot on the device before cutting using the other slot. Ex. 1023 ¶¶ 10–13, 20; *see also id.* ¶¶ 12–13, 20 (offering expert opinion and evidence that one slot is intended to be used for the left knee, one for the right). Thus, the slots are two different guide surfaces for two different cutting motions. Whether these guide surfaces are connected at some unseen portion (as Patent Owner alleges) is not relevant for purposes of claim 1 of the '896 patent because, looking at Figure 15 of Scorpio, we can ascertain the transverse dimension of the physician-side opening of that slot, which is a transverse dimension of that guide surface. According to Dr. Mabrey, this transverse dimension is less than a transverse dimension of a replacement portion. Ex. 1002 ¶ 70; Ex. 1023 ¶¶ 10–11. Patent Owner does not convince us otherwise. We, therefore, credit the testimony of Dr. Mabrey that this transverse dimension of the right guide surface of Scorpio in Figure 15 is less than a transverse dimension of a replacement portion.

Further, even if we were to consider the Scorpio-branded guide as evidence of what a person of ordinary skill in the art would have understood reading the Scorpio reference, and we were limited to considering “a transverse dimension of the guide surface” to mean the longest transverse dimension of the guide surface, *arguendo*, we would still be persuaded that Scorpio disclose the claimed features. First, Dr. Mabrey’s testimony that the two slots define two different guide surfaces because they are used in two different cutting motions is persuasive, even if the slots in Scorpio’s Figure

15 were to overlap.<sup>10</sup> In other words, a person of ordinary skill in the art would consider them different guide surfaces because of the way they are used, and a small overlap would not change that use. Second, we are not persuaded that this incredibly tiny passage even is used as a cutting guide. Dr. Schoifet testifies that the small passage is necessary to sufficiently angle a cutting blade (Ex. 2004 ¶ 78), but Dr. Mabrey's performance of a complete resection using only one slot and not using the small passage refutes Dr. Schoifet's testimony on this matter (Ex. 1023 ¶¶ 15–16, 19–21). Dr. Schoifet offers no other explanation as to why the small passage is necessary for resection. *See also* Ex. 1031, 127:7–148:9 (during over 30 minutes of questioning on this topic, Dr. Schoifet did not answer why he believed the Scorpio device would be inoperable without the small passage). Thus, even if we were to consider the Scorpio-branded guide in the manner Patent Owner proposes, Petitioners have established persuasively that the bone sides of both slots define two separate guide surfaces, either of which would be smaller than a transverse dimension of a replacement portion. *See* Ex. 2007 (noting the physician-side and bone-side transverse dimensions of the guide surfaces are essentially the same)

In view of the above, we determine that Petitioners have shown, by a preponderance of the evidence, that Scorpio describes a guide surface having

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<sup>10</sup> The overlap would be extremely small. Dr. Mabrey testifies that the small passage in the Scorpio-branded product is about 1 mm wide by 0.5 mm deep. Ex. 1023 ¶ 14. This would make the passage the size of about half a pinhead on an object a little larger than a person's knee. *See* Ex. 1005, Fig. 15 (depicting the cutting guide extending past both sides of a femur); Scorpio Demonstration Photos, Ex. 1030, 40 (depicting the cutting guide installed on a cadaver, extending past both sides of the knee).

a transverse dimension less than a transverse dimension of a replacement portion.

6. *Reason to Combine Stulberg and Scorpio*

Petitioners assert that a person of ordinary skill in the art would “follow the teachings of Stulberg that computer-assisted surgery can overcome the deficiencies of standard mechanical measuring techniques,” such as the mechanical instrument in Scorpio. Pet. at 45–46. Patent Owner makes several arguments: there is “no apparent reason [to] abandon the cutting guide of Stulberg” (PO Resp. 32); “if . . . Scorpio is to be used, it would need to be mounted with an intramedullary alignment rod” (*id.* at 33, 35); “Stulberg provides a distal femoral cutting guide [but] Scorpio . . . is an anterior resection guide” (*id.* at 34). Each of these arguments is unpersuasive because they presume bodily incorporation and do not speak to the combination proposed by Petitioners in the Petition.

First, Petitioners show that the prior art establishes that one of ordinary skill in the art reviewing Stulberg had a reason to look to the use of computer assistance with respect to other cutting guides. Pet. 34–35 (citing Ex. 1002 ¶¶ 70–71 (citing Ex. 1003, 49–50, 52–53)); *id.* at 45–46 (citing Ex. 1005, 25). For example, Stulberg “describe[s] in detail a technique that [i]ncorporates the use of a currently available and clinically validated state-of-the-art mechanical instrumentation system.” Ex. 1005, 25. Stulberg also suggests the superiority of computer-aided alignment versus mechanical alignment. *Id.*; *see also* Ex. 1023 ¶ 40 (“Stulberg provides a computer-assisted technique that *could be adapted to any cutting guide* to eliminate any mechanical alignment.”) (emphasis added). Delp suggests that “[t]he capabilities of mechanical instruments can be *enhanced* by integrating them

with highly accurate [computer-assisted] measurement equipment.”

Ex. 1003, 50 (emphasis added). Thus, contrary to Patent Owner’s assertion, we are persuaded that there is a sufficient reason for one of ordinary skill in the art to look to the use of computer assistance with respect to existing cutting guides.<sup>11</sup>

Further, Patent Owner’s argument that Scorpio’s cutting guide requires an intramedullary rod presumes bodily incorporation. A combination is not a physical grafting of one structure onto another. *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984) (one of ordinary skill is not compelled to blindly follow the teaching of one prior art reference over the other without the exercise of independent judgment); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference”). In addition, one of ordinary skill can use his or her ordinary skill, creativity, and common sense to make the necessary adjustments and further modifications to result in a properly functioning device. *See KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418

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<sup>11</sup> We also note that the computerization of manual processes is a common theme in stories of obviousness. *See, e.g., Western Union Co. v. MoneyGram Payment Systems Inc.*, 626 F.3d 1361, 1370 (Fed. Cir. 2010) (reviewing precedent and concluding that “applying computer and internet technology to replace older electronics has been commonplace in recent years”); *Leapfrog Enterprises, Inc. v. Fisher Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (“[a]ccommodating a prior art mechanical device . . . to modern electronics would have been reasonably obvious to one of ordinary skill . . .”); *see also In re Venner*, 262 F.2d 91 (CCPA 1958) (“it is well settled that it is not ‘invention’ to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result”).

(2007) (“the [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ”).

Here, Patent Owner’s declarant, Dr. Schoifet, testifies, “[a] person of ordinary skill in the art would have had difficulties performing computer-assisted navigation resection with the Scorpio guide because the guide is so large and would be unstable without the positioning and mounting assistance of the intramedullary rod of Scorpio.” Ex. 2004 ¶ 81. We do not credit Dr. Schoifet’s testimony in this regard because it narrowly focuses on the attachment of Scorpio’s *alignment guide* to the bone, whereas Petitioners’ proposed combination relies on Scorpio’s *cutting guide*, not the alignment guide. We credit Dr. Mabrey’s testimony that the cutting guide of Scorpio could be used with the alignment guide and computer-assistance positioning technique disclosed in Stulberg. Ex. 1023 ¶ 44; *see also id.* (Dr. Mabrey testifying that Scorpio’s design is “modular” and has separate alignment and cutting guides, and that “[t]he size and shape of Scorpio have no effect on the ability to apply computer-assisted techniques.”).

Dr. Schoifet further testifies that Petitioners’ proposed combination is improper because Scorpio’s guide is an anterior cutting guide, whereas Stulberg’s guide is a “4 in 1 cutting block.” Ex. 2004 ¶ 81. Again, this argument does not address the proposed combination. Stulberg describes an alignment guide secured to a bone; the proposed combination is to use Scorpio’s anterior cutting guide. Pet. 44–46 (“obvious . . . to utilize the computer-assisted system disclosed in Stulberg in combination with the cutting guides . . . [of] Scorpio.”); Ex. 1005, 32 (discussing in Stulberg that

“[t]he cutting block . . . is attached [to the alignment guide] . . . . The anterior, posterior, and chamfer cuts are then made”); Ex. 1023 ¶ 45 (Dr. Mabrey testifies: “The fact that different cuts are being made is irrelevant to the fact that computer-assisted techniques could be applied to the Scorpio technique.”). In addition, the proposed combination is not to physically attach the Scorpio resection guide onto the alignment block of Stulberg, but rather to take the teachings of such a guide and use them with the alignment block of Stulberg. *Lear Siegler*, 733 F.2d at 889; *see also In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973) (“Combining the *teachings* of references does not involve an ability to combine their specific structures.”). If some adjustments or modifications are necessary, they would be merely in the manner by which the Scorpio-style cutting guide is attached to the Stulberg-style alignment guide. Reviewing the manner in which these objects are connected in the references before us (*e.g.*, Stulberg and Scorpio), this appears to be nothing more than a straightforward, predictable exercise in placing posts and holes in the correct positions.

Given that the prior art suggests updating mechanically-aligned cutting guides using computer-assisted alignment techniques, we are persuaded that Petitioners’ reason for combining the teachings of Stulberg and Scorpio is a sufficiently articulated reason with rational underpinnings to justify the legal conclusion of obviousness. Accordingly, Petitioners have provided a sufficient reason to combine the teachings of Stulberg and Scorpio in the Petition, and Patent Owner’s arguments against are unpersuasive.



*7. Conclusion Regarding the Stulberg-Scorpio Ground*

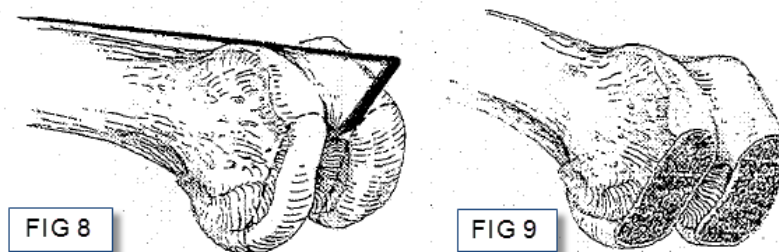
Having reviewed Petitioners' Petition and Reply, Patent Owner's Response, and the evidence cited therein, we determine that Petitioners have established, by a preponderance of the evidence, that the subject matter of claim 1 of the '896 patent would have been obvious in view of the teachings of Stulberg and Scorpio.

*C. The Stulberg-Turner Ground*

We first discuss the prior art used in Petitioners' ground. Then we discuss the ground itself, before turning to the issues raised in Patent Owner's arguments and our analysis.

*1. Turner*

The Turner reference describes the state of the knee replacement art as of 1980. Ex. 1008, inside cover.<sup>12</sup> Of importance to the discussion in this Decision, Turner discloses a femoral cutting guide. *Id.* at Fig. 8. "The femoral cutting guide is inserted in the midline, deep to the suprapatellar pouch." *Id.* at 181.<sup>13</sup> Figures 8 and 9 of Turner are reproduced below.



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<sup>12</sup> This Exhibit begins with two unnumbered pages, which we refer to as the cover and inside cover.

<sup>13</sup> The suprapatellar pouch extends between the quadriceps tendon and the front of the femur, and is an extension of the synovial sac that encloses and lubricates the knee joint.

Figure 8 of Turner depicts a femoral cutting guide that fits along the midline of the femur, and its width is much smaller than the width of the resected bone. Figure 9 depicts the resulting appearance of the femur after the cut. The portions of the femur that are cut are later covered by the prosthesis. *See, e.g., id.* at Fig. 20. Accordingly, the transverse dimension of the prosthesis will be larger than the transverse dimension of the cutting guide shown in Figure 8. *See* Pet. 33 (arguing that Turners' guide surface length D1 is substantially less than transverse (across the knee) length D2 of the implant).

## 2. *Petitioners' Proposed Combination*

Petitioners assert that Stulberg teaches every limitation of claim 1 except for the limitation, "the replacement portion having a transverse dimension that is larger than a transverse dimension of the guide surface." Pet. 43–47. Petitioners assert that Turner discloses this feature. *Id.* Specifically, Petitioners assert that the width of the cutting guide shown in Turner's Figure 8 is substantially smaller than the implant. Pet. 33 (citing Ex. 1008, 177, 181, Figs. 3, 8; Ex. 1002 ¶ 69).

Petitioners assert that a person of ordinary skill in the art would "follow the teachings of Stulberg that computer-assisted surgery can overcome the deficiencies of standard mechanical measuring techniques," such as the mechanical instrument in Turner. *Id.* at 45–46; *see also* Pet. Reply 11 ("A person of ordinary skill therefore would have been motivated to reduce trauma by eliminating mechanical alignment, as taught in . . . Stulberg, combined with smaller guide surfaces, as shown in Turner."). Petitioners reason this would improve the accuracy of Turner (Pet. Reply 8),

and is “the predictable use of prior art technology according to its established function to achieve a predictable result” (Pet. 46 (citing Ex. 1002 ¶ 92)).

### 3. *Issue*

Patent Owner argues that the device in Turner is nothing more than a “rough reference” to make an “eyeball” or “free-hand” cut. PO Resp. 26–27 (citing Ex. 2004 ¶ 70). Patent Owner’s expert testifies that “[u]sing computer-assisted navigation to make an eyeball cut is not going to make the procedure [of Turner] any better.” Ex. 2004 ¶ 73. Patent Owner also argues that the device in Turner is an extramedullary-mounted cutting guide that aligns with the anatomical axis of the femur. PO Resp. 26, 28; *see also* Ex. 2004 ¶ 66 (further noting that Turner is “handheld”).

Accordingly, the issue here is whether the teachings of Stulberg may be combined with Turner in the manner proposed by Petitioners to arrive at the claimed invention, given the significant differences in approaches between the cutting guides of both references.

### 4. *Analysis*

Petitioners have not set forth clearly in their Petition how they propose to combine the teachings of Stulberg and Turner to arrive at the claimed invention. Petitioners address where each limitation of the claim is found in Stulberg or Turner, but a proper obviousness analysis requires more than an identification of each claim element in the prior art. *KSR*, 550 U.S. at 418 (“a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art”). As the Supreme Court stated in *KSR*, the obviousness analysis

requires a showing of “whether there was an apparent reason to combine the known elements *in the fashion claimed by the patent at issue.*” *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)). Although we are cognizant that “[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference,” *Keller*, 642 F.2d at 425, we must still be apprised, with sufficient exposition given the context, of what teachings are to be taken from what reference and how those teachings are going to be applied, in order to make a proper determination of whether that particular application of the teachings is within the level of ordinary skill in the art.

Upon reviewing the Petition and the Reply, we glean three possible combinations from Petitioner’s arguments. We address each in turn.

*a. No Modification of Turner*

Claim 1 requires a cutting guide to be “secured to the bone.” Ex. 1001, 113:1. If Petitioners are proposing to take the Turner structure as-is and utilize Stulberg’s teaching to use computer-assisted alignment, then Petitioners would not address this limitation. This is because the cutting guide in Turner is, essentially, a hand-held rod that is held, unsecured, up against the bone. The Turner guide is inserted along the midline of the femur, in the suprapatellar pouch. Ex. 1008, 181. Patent Owner’s declarant, Dr. Schoifet, testifies that the Turner device is a “handheld cutting guide” that “simply sits in between the condyles.” Ex. 2004 ¶ 66. When Petitioners’ declarant, Dr. Mabrey, was deposed, he testified that “[Turner] doesn’t describe any technique for attaching it to the femur,” and that “[he doesn’t] see any design attributes in [Figure 8 of Turner] that would indicate any attachment points.” Ex. 2003, 71:9–72:5. In addition, in his Reply

Declaration, Dr. Mabrey testifies that Turner's device "rests on the anterior [surface of the] femur" (emphasis added). Ex. 1023 ¶ 35. Accordingly, Petitioners have not established that Turner's handheld guide is "secured to the bone" in the manner required by claim 1.

*b. Modification of Stulberg and Turner*

In its Petition, Petitioners assert that Stulberg teaches the "secured to the bone" limitation when it discloses that a cutting guide is secured to the femur using "5-mm threaded wire." Pet. 44 (citing Ex. 1005, 30). For the cutting guide, Petitioners cite to Turner. *Id.* at 45 (citing Ex. 1004, Figs. 8, 14). Thus, Petitioners appear to be suggesting to use Stulberg's alignment guide with Turner's cutting guide.

The Stulberg cutting guide (*see, e.g.*, Fig. 16A, *supra*), however, is quite different from the cutting guide of Turner (*see* Fig. 8, *supra*), and Petitioners have not explained sufficiently how one of ordinary skill would have combined the small cutting guide of Turner with the securement structure of Stulberg, let alone established sufficient facts to support a conclusion of obviousness of such a combination. Although Petitioners correctly point out that "[t]he obviousness inquiry does not ask 'whether the references could be physically combined,'" that does not mean that Petitioners do not need to address what combination is offered to satisfy the requirements of the claim. Pet. Reply 15–16 (quoting *In re Chevalier*, 500 F. App'x 932, 934 (Fed. Cir. 2013)); *KSR*, 550 U.S. at 418 ("a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art").

Here, the nature of the proposed combination is not apparent to us. The alignment guide of Stulberg is attached on the distal end of the femur and is aligned by adjusting its orientation relative to the bone. The alignment guide of Turner (which is also the cutting guide) is set on top of the femur and is aligned by simply pushing it in place until it rests between the condyles. Due to its elongated, rod-like nature, it is not clear how one could adjust the alignment guide's orientation relative to the bone (using, e.g., a computer-assisted method) without the end of the alignment portion of the guide furthest from the cutting surface swinging or tilting away from the femur on which it rests, which would then make securing it at such an angle precarious (or perhaps place undue strain on the suprapetallar pouch in which the guide resides). To put it another way, it is not a simple matter to see how one of ordinary skill in the art would have combined the teachings of Turner to those of Stulberg to arrive at the claimed invention.<sup>14</sup> *See Perfect Web Technologies, Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009) (determining that no expert opinion was necessary to evaluate a proposed modification to simple technology but cautioning that, “[i]f the relevant technology were complex, the court might require expert opinions.”) (citation omitted).

It is Petitioners' burden to set forth sufficient facts to establish that it would have been obvious to a person of ordinary skill in the art to modify Turner's cutting guide to include a structure that allows it to be secured to

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<sup>14</sup> We need not discredit Dr. Mabrey's testimony that Stulberg teaches that computer-assisted use of any guide is beneficial to reach our conclusion. *See Ex. 1023 ¶ 37*. The claim requires more than mere computer assistance of any existing mechanical guide; it requires a guide to be a certain size and to be “secured to the bone.”

the bone using threaded wire, such as taught in Stulberg. Given the unanswered questions about how these teachings would be combined, we determine that Petitioners have not met their burden.

*c. Modification of Stulberg Only*

Petitioners' third theory is that Turner teaches to make cutting guides smaller, in general, and one would apply that alleged teaching of Turner to make the cutting guides of Stulberg smaller. Pet. Reply 16 (citing Ex. 1023 ¶¶ 39, 45, 48–50); Tr. 8:2–7. This reasoning was not presented in the Petition and, thus, constitutes a newly asserted ground because it takes a different thrust and would rely on a different factual basis. *See, e.g., In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000) (citation omitted) (the presence or absence of a reason “to combine references in an obviousness determination is a pure question of fact.”).

Addressing Petitioners' new theory, *arguendo*, we are not persuaded by Petitioners' assertion that Turner's disclosure of a relatively small cutting guide teaches a general principle that all cutting guides may be made smaller. A disclosure of a small item is different from a disclosure of making items smaller. Petitioners do not show where Turner discusses the size of its cutting guide, much less cutting guides in general. Petitioners' declarant, Dr. Mabrey, merely states that “Turner teaches . . . that guide surfaces smaller than the implant can be used,” but does not cite to any place where Turner teaches to *make guide surfaces smaller* than the implants. Ex. 1023 ¶ 39. On the other hand, Patent Owner's declarant, Dr. Schoifet, testifies: “[t]here is . . . no indication that the relative size of the cutting surface of the cutting guide and the replacement component is of any interest [in Turner].” Ex. 2004 ¶ 51. Dr. Schoifet's testimony most closely

comports with the Turner disclosure (or lack thereof, rather). Accordingly, we credit Dr. Schoifet's observation that Turner does not discuss the size of guide surfaces, and we are not persuaded by Petitioners' position that Turner teaches making the cutting guide of Stulberg smaller than the replacement component.

#### *5. Conclusion Regarding the Stulberg-Turner Ground*

Having reviewed Petitioners' Petition and Reply, Patent Owner's Response, and the evidence cited therein, we determine that Petitioners have not established, by a preponderance of the evidence, that the subject matter of claim 1 of the '896 patent would have been obvious in view of the teachings of Stulberg and Turner.

#### *D. The Delp-Scorpio Ground*

The Delp-Scorpio ground largely mirrors the Stulberg-Scorpio ground, with Delp taking the place of Stulberg's teachings of a computer-assisted resection, and Scorpio again being relied upon for the teaching of a guide surface having a transverse dimension smaller than a replacement portion. Pet. 27–37. We first discuss the prior art used in Petitioners' ground. Then we discuss the ground itself, before turning to the issues raised in Patent Owner's arguments and our analysis.

#### *1. Delp*

Delp discusses the limitations of mechanical alignment guides used in knee surgery, such as intramedullary and extramedullary devices, and proposes three computer-based systems to improve the success of knee replacement surgeries. Ex. 1003, 49. The first system utilizes computer-integrated instruments to “augment[] mechanical instruments through the



addition of measurement probes that can be used to locate joint centers, track surgical tools, and align prosthetic components.” *Id.* at 50–51. In this system, a computer “displays the position of the cutting block relative to the desired position.” *Id.* at 51. The cutting block (jig) is secured and the cuts are made. *Id.* According to Delp, this method “eliminates the need for intramedullary and extramedullary alignment guides.” *Id.* at 55. The second system in Delp includes the use of computer imaging to determine a preoperative plan that guides the placement of the components. *Id.* at 50. The third system uses a robotic device to perform the cutting operations. *Id.*

## 2. *Petitioners’ Proposed Combination*

Petitioners assert that Delp teaches every limitation of claim 1, except for the limitation, “the replacement portion having a transverse dimension that is larger than a transverse dimension of the guide surface.” Pet. 27–37. Petitioners assert that Scorpio discloses this feature. Pet. 32–33. Petitioners also assert that the width of the cutting guide shown in Scorpio at Figure 15 (i.e., one of the slots) is smaller than the implant. Pet. 33 (citing Ex. 1009, 2, 9, Fig. 15; Ex. 1002 ¶ 70). Petitioners assert that it would have been obvious to one of ordinary skill in the art to use “the cutting guides and implants disclosed in . . . Scorpio” along with the “systems described in the Delp Article.” Pet. 34. One reason for doing this, according to Petitioners, is because “[u]sing ‘measurement probes’ . . . disclosed in the Delp Article to improve the accuracy of mechanical instruments from . . . Scorpio would have been no more than the predictable use of prior art elements according to their established functions.” Pet. 35; *see also* Ex. 1002 ¶ 72; Ex. 1003, 50 (the purpose of the computer-integrated instruments are to “augment[] mechanical instruments”). Petitioners also rely on the opinion of Dr.

Mabrey that the proposed combination is “no more than the predictable use of prior art elements according to their established functions” requiring no more than “routine skill.” Pet. 35 (citing Ex. 1002 ¶ 72).

Petitioners also assert an alternative rationale, that “it would have been obvious to reduce the length of the guide surface . . . so that the guide could fit through a smaller incision.” Pet. 34. Petitioners reason that this “was a known solution for reducing trauma,” relying on the testimony of Dr. Mabrey (Ex. 1002 ¶ 70), as well as a teaching in U.S. Patent No. 5,871,018 (issued Feb. 16, 1999) (Ex. 1004, 22:45–50, “smaller jigs [allow] a smaller incision to be made. A smaller incision will result in a less invasive procedure, and will lead to [certain benefits].”). *Id.*

### 3. Patent Owner’s Arguments

Patent Owner first argues that a person of ordinary skill in the art “would have no apparent reason to employ the intramedullary mounted cutting guide of Scorpio in [the computer-assisted techniques of Delp].” PO Resp. 53, 56–58. As we explained above in Section II.B.6, Petitioners have established that a person of ordinary skill in the art would have a reason to use computer-assisted alignment of existing mechanical guides. As we also explained, Patent Owner’s arguments presume bodily incorporation and are not commensurate with the ground proposed by Petitioners.

Patent Owner next argues that Scorpio does not meet the “transverse dimension of a guide surface” limitation and relies on its arguments addressed above in Section II.B.5. PO Resp. 54. Patent Owner’s arguments are unpersuasive for the reasons we set forth in Section II.B.5.

Patent Owner lastly disputes Petitioners' alternative rationale, that it would have been obvious to reduce the length of a guide surface as a known solution for reducing trauma. PO Resp. 54–56. Petitioners have already demonstrated sufficiently a rationale to combine the teachings of Delp and Scorpio to arrive at the claimed invention. Thus, we need not address this alternative rationale.

*4. Conclusion Regarding the Delp-Scorpio Ground*

Having reviewed Petitioners' Petition and Reply, Patent Owner's Response, and the evidence cited therein, we determine that Petitioners have established, by a preponderance of the evidence, that the subject matter of claim 1 of the '896 patent would have been obvious in view of the teachings of Delp and Scorpio.

*E. The Delp-Turner Ground*

This ground largely tracks the Stulberg-Turner ground in which we determined Petitioners failed to show by a preponderance of the evidence that the subject matter of claim 1 of the '896 patent was unpatentable over the teachings of Stulberg and Turner. For reasons similar to those set forth above in Section II.C, we reach the same conclusion here.

**III. ORDER**

In view of the foregoing, it is:

ORDERED that Petitioners have shown, by a preponderance of the evidence, that the subject matter of claim 1 of the '896 patent is unpatentable in view of Stulberg and Scorpio and unpatentable in view of Delp and Scorpio;

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FURTHER ORDERED that Petitioners have not shown, by a preponderance of the evidence, that the subject matter of claim 1 of the '896 patent is unpatentable in view of Stulberg and Turner or unpatentable in view of Delp and Turner; and

FURTHER ORDERED that this is a final written decision and that parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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