

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ALPHATEC HOLDINGS, INC. AND ALPHATEC SPINE, INC.  
Petitioners,

v.

NUVASIVE, INC.,  
Patent Owner.

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Case No. IPR2019-00362  
United States Patent No. 8,361,156

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**PETITIONERS' SUPPLEMENTAL SUR-SUR-REPLY TO PATENT  
OWNER'S RESPONSE**

## I. INTRODUCTION<sup>1</sup>

Patent Owner erroneously categorizes Michelson '770 (EX1053) and McAfee (EX1054) as “new evidence” that “deviates, or attempts to change the ‘thrust’ of the challenges set forth in the petition.” Paper 41, 1. But, “[a] party also may submit rebuttal evidence in support of its reply.” Consolidated Practice Guide, 73, citing *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1077–78 (Fed. Cir. 2015) (no error in ruling new declaration was “generally ... in fair reply to [Patent Owner’s expert’s] declaration and/or [Patent Owner’s] response to the revised petition” and “was [not] necessary for [Petitioner] to establish a prima facie case”). *Belden* applies here—Michelson '770 and McAfee directly rebut the argument that “Dr. Branch’s characterization of the state of the art is inaccurate and unreliable,” especially as to the modular insertion of implants, and that implementing a “marker configuration [that] ‘allow[s] surgeons to align the markers with the spinous process during and after the implant is inserted laterally’” is “impermissible hindsight.” Paper 27, 9, 25–26.

“[T]he obviousness ‘analysis *requires* an assessment of the ‘...background knowledge possessed by a person having ordinary skill in the art.’” *Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1337 (Fed. Cir 2020) (emphasis in original). In *Phillips*, “the Board relied on expert evidence, which was corroborated

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<sup>1</sup> The Board authorized this filing in Paper No. 37, filed February 21, 2020.

by Hua [prior art not included in a combination], in concluding that pipelining was not only in the prior art, but *also within the general knowledge of a skilled artisan.*” *Id.* at 1338.<sup>2</sup> Patent Owner does not acknowledge *Phillips* and has “offered no evidence to rebut the conclusion that a skilled artisan would have known about” the teachings of Michelson ’770 and McAfee. *Id.* In fact, Michelson ’770 and McAfee were known to and used by Patent Owner *years* before these proceedings. *See, e.g.*, Paper 34, 1–2, 4–5; EX1034, 26–27; EX1038, ¶19; EX1047, 5, 8; *Medtronic Sofamor Danek, USA v. NuVasive, Inc.*, Case No. 3:08-cv-01512-MMA, Doc. No. 358 at 58–62 (Patent Owner introducing Michelson ’770 to cross examine Dr. Michelson in an attempt to invalidate the ’973 patent (EX1032)). Worse, Patent Owner apparently chose not to inform its experts of these prior art references or Patent Owner’s prior proceedings so it could rely on uninformed experts to argue that “Petitioner’s expert overstated and exaggerated developments in the field.” *See* Paper 41, 4; Paper 34, 2, 4–5; *see also* EX1050, 23:18–28:9, 30:18–34:17, 37:6–38:3, 48:3–49:11, 53:23–54:15, 56:10–58:20; EX1051, 31:13–16, 54:11–13; EX1052, 23:7–24:22, 35:13–41:1; 62:6–10; 63:18–25. Petitioners could not anticipate Patent Owner’s blatant misrepresentation of a POSA’s general knowledge, especially in light of references that Patent Owner *itself* previously relied on, which directly rebut Patent Owner’s statements.

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<sup>2</sup> Unless otherwise noted, all emphasis is added and all internal cites are omitted.

## II. MICHELSON '770 REBUTS PATENT OWNER'S ARGUMENT

Patent Owner argues that Petitioners advance “several arguments indicating retreat from its previous reliance on the modularity of Michelson as illustrated in Figs. 18 and 19 in numerous respects.” Paper 41, 2. **First**, Patent Owner argues that neither McAfee nor Michelson '770 “describes a modular implant as in Michelson nor does Petitioner assert otherwise.” *Id.*, 3. **Second**, Patent Owner argues that Petitioners’ reply “presents no cogent argument as to how these references relate to the petition arguments based on the modularity of Michelson.” *Id.* **Third**, Patent Owner argues that “Ppetitioner still fails [to] explain how” Michelson’s modularity teaching “increases safety and minimizes invasiveness.” *Id.* **Fourth**, Patent Owner argues that “Ppetitioner’s expert overstated and exaggerated developments in the field in numerous instances, which called into question the reliability and credibility of the direct testimony.” *Id.*, 4. None of this is true.

**Michelson '770 and McAfee describe modular implants.** Michelson’s “modularity” teaching *expressly does not require* “modifying a single implant to a multi-component assembly.” *Contra* Paper 41, 3. As Petitioners explained, Michelson expressly states that “FIG. 19 is a perspective lateral anterior view of a segment of the spinal column with a *plurality of the spinal implants of FIG. 18* shown in hidden line *inserted from the lateral aspect in a modular fashion* in the disc space between two adjacent vertebrae along the transverse width of the

vertebrae.” EX1032, 5:34–39, *see also* Paper 34, 12. If modular components must be assembled *prior to* insertion, there would be no need for Michelson’s implant 1000, which “has a narrower width” than implant 900. Paper 34, 12. Instead, Michelson’s modularity involves implants having “a narrower width such that more than one spinal fusion implant 1000 may be combined in a modular fashion for insertion within the disc space D.” EX1032, 10:52–54, *see also* claims 21, 34. Michelson’s long-and-narrow, modular implants are placed side-by-side. EX1032, Fig. 19. Although Figure 19 illustrates three long-and-narrow modular implants positioned side-by-side within the disc space, the Federal Circuit commented that the “point” of Figure 19 “is to show more than one” implant. *In re NuVasive, Inc.*, 841 F.3d 966, 974 (Fed. Cir. 2016). In fact, “openings 906” of the implant further illustrate that modularity does not require “modifying a single implant to a multi-component assembly.” *Compare* Figure 16 implant showing six “openings 906” across the width *with* Figure 18 implant showing two “openings 906” and Figure 19 implant showing five “openings 906”; EX1032, Figs. 16, 18, 19, 10:25–27. Petitioners explain how Michelson ’770 and McAfee both disclose the same long-and-narrow, modular implants arranged in a side-by-side orientation. *See, e.g.*, Paper 34, 1–3, 10–12.

**Michelson ’770 and McAfee directly relate to the Petition.** Consistent with Michelson, which teaches an implant having a depth “that approximates the depth

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