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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MASIMO CORPORATION,
Patent Owner.

Case IPR2024-00243
U.S. Patent 10,722,159

PATENT OWNER PRELIMINARY RESPONSE

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EXHIBIT LIST¹

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2002	Expert Declaration of Vijay K. Madiseti
2003	Commission Opinion (Public), <i>Certain Light-Based Physiological Measurement Devices and Components Thereof</i> , Inv. No. 337-TA-1276, EDIS No. 808521 (ITC Oct. 26, 2023)
2004	Decision Denying Institution of Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01271, Paper 15 (PTAB Jan. 24, 2023)
2005	Decision Denying Institution of Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01272, Paper 16 (PTAB Jan. 24, 2023)
2006	Decision Denying Institution of Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01273, Paper 15 (PTAB Jan. 24, 2023)
2007	Decision Denying Institution of Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01274, Paper 15 (PTAB Jan. 24, 2023)
2008	Decision Denying Institution of Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01275, Paper 15 (PTAB Jan. 30, 2023)

¹ Masimo reserves certain exhibit numbers with the intent to reuse exhibit numbering from IPR2022-01291 should the Board institute IPR.

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2009	Decision Denying Institution of Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01276, Paper 15 (PTAB Jan. 30, 2023)
2010	Plaintiff Apple Inc.'s Opposition to Defendants' Motion for Stay Pending Inter Partes Review (Public), <i>Apple Inc. v. Masimo Corp.</i> , No. 22-1378-MN-JLH (D. Del. Jan. 10, 2024), D.I. 457
2011	Plaintiff Apple Inc.'s Opening Brief in Support of Its Motion for an Expedited Trial, <i>Apple Inc. v. Masimo Corp.</i> , No. 22-1377-MN-JLH (D. Del. Feb. 10, 2023), D.I. 50
2012	Transcript of May 5, 2023 Hearing in <i>Apple Inc. v. Masimo Corp.</i> , Nos. 22-1377-MN-JLH, 22-1378-MN-JLH (D. Del. May 5, 2023)
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2018	Transcript of September 14, 2023 Markman Hearing, <i>Apple Inc. v. Masimo Corp.</i> , Nos. 22-cv-1377-MN-JLH, 22-cv-1378-MN-JLH

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2020	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1271, Paper 20 (PTAB June 20, 2023)
2021	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1272, Paper 20 (PTAB June 20, 2023)
2022	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1273, Paper 19 (PTAB June 20, 2023)
2023	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1274, Paper 19 (PTAB June 20, 2023)
2024	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1275, Paper 19 (PTAB June 26, 2023)
2025	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1276, Paper 20 (PTAB June 26, 2023)
2026	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1292, Paper 17 (PTAB Mar. 7, 2023)
2027	Notice of Refund, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-1466, Paper 17 (PTAB Apr. 5, 2023)
2028	Correspondence from counsel for Apple to counsel for Masimo regarding Apple's prior art grounds in the Delaware Litigation, dated November 16, 2023
2029	June 6–10, 2022 Public Hearing Transcript, ITC Inv. No. 337-TA-1276
2030	Emails dated August–September 2022 between Apple's and Masimo's Counsel re IPR2022-01291 and -01465

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2031	Email chain regarding false statements in IPR Petitions
2032	November 17, 2023 Letter from U.S. Food & Drug Administration to Masimo Corp. re Masimo W1 510(k) Clearance
2033	Petition for Inter Partes Review, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01292
2034	Petition for Inter Partes Review,
2035	Final Written Decision (Public Version), <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01291 (Jan. 30, 2024)
2036	Final Written Decision (Public Version), <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01465 (Feb. 2, 2024)
2037	Redacted Excerpt of the December 15, 2023 Rebuttal Report of Dr. Majid Sarrafzadeh
2038	Joint Claim Construction Statement Regarding Masimo Asserted Patents, <i>Apple Inc. v. Masimo Corp.</i> , No. 22-1378-MN-JLH (Aug. 31, 2023)
2039	Petitioner's Reply (Public Version), <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01291
2040	Order re Conduct of the Proceedings, <i>Apple Inc. v. Masimo Corp.</i> , IPR2022-01291, Order Conduct of the Proceedings (Paper 43)
2041	Excerpt of Apple's Final Invalidity Contentions, <i>Apple Inc. v. Masimo Corp.</i> , No. 1:22-cv-1378-JLH (D. Del.)
2042	Masimo Post-Hearing Brief (Public Version), ITC Inv. No. 337-TA-1276

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2043	ITC Final Initial Determination (Public Version), ITC Inv. No. 337-TA-1276
2050	Apple Inc.'s Post-Hearing Brief (Public Version), ITC Inv. No. 337-TA-1276
2056	Excerpts of File History of App. No. 16/532,065
2057	Excerpts of File History of App. No. 15/195,199
2072	Excerpt of Webster's II New College Dictionary (2001)
2074	Nonconfidential Excerpt of Page 65 from June 6-10, 2022 Hearing Transcript, ITC Inv. No 337-TA-1276

Pursuant to 35 U.S.C. § 313, 37 C.F.R. § 42.107 and the Notice of Filing Date Accorded to Petition, dated January 11, 2024 (*see* Paper 5), Masimo Corporation (“Masimo”) hereby submits its Preliminary Response to the Petition for *Inter Partes* Review of U.S. Patent No. 10,722,159 (“the ’159 Patent”) filed by Apple Inc. (“Apple” or “Petitioner”).

I. INTRODUCTION

Masimo is the technology leader in the field of noninvasive physiological monitoring. In 1989, Masimo was a small startup operating in an inventor’s condo. Today, Masimo is a publicly traded company employing 6,300 people worldwide with annual revenues exceeding one billion dollars. Masimo technology is used in clinical care to monitor over 200 million patients per year. This growth followed Masimo’s development of a range of technologies that revolutionized the field of noninvasive physiological monitoring. Other Masimo patents have withstood extensive attacks, including in litigation through trials, inter-partes reexaminations, an ITC investigation, IPRs, and appeals.²

² *See, e.g., Mallinckrodt, Inc. v. Masimo Corp.*, 147 Fed. Appx. 158, 2005 WL 2139867 at *3 (Fed. Cir. Sept. 7, 2005); *Masimo Corp. v. Philips Elec. N. Am. Corp.*, 2015 WL 2379485 at *1 (D. Del. May 18, 2015); EX2003 (ITC Commission Opinion); EX2004-2009 (PTAB denials of institution for IPR2022-01271-IPR2022-

Apple's Petition arises from parallel litigation in Delaware district court ("Delaware Litigation"). Apple was not, historically, a company that had any involvement in physiological monitoring technologies. But, around 2013, Apple decided to enter the field and sought out Masimo for its technology. Despite claiming an interest in integrating Masimo's technology into Apple's products, Apple began poaching Masimo's employees, one after another. The poached employees included Chief Technical Officer Marcelo Lamago, an inventor of the three Masimo patents that the ITC recently found Apple infringed. Lamago took Masimo's sensor design knowledge with him to Apple. And in the Delaware Litigation, Masimo accused Apple's Watches of infringing Masimo's patented technology, including key features disclosed and claimed in the '159 Patent.

The Board should exercise its discretion to deny institution. Because Apple delayed until the one-year deadline to file its Petition, the Delaware Litigation is already at a late stage. The parties and Delaware court have already invested significantly in the Delaware Litigation. And trial preparations will cause that investment to grow by the time of the institution decision here. Further, Apple did

01276); *Masimo Corp. v. Apple Inc.*, 2023 WL 5921622, at *9 (Fed Cir. Sept. 12, 2023); *Apple Inc. v. Masimo Corp.*, 2024 WL 137336, at *1 (Fed. Cir. Jan. 12, 2024); *Apple Inc. v. Masimo Corp.*, 2024 WL 139570, at *1 (Fed. Cir. Jan. 12, 2024).

not provide a *Sotera* stipulation. And here, Apple advances an obviousness theory but did not inform the Board that the prior art does not disclose all the claim limitations under Apple's own Delaware Litigation claim construction positions. Apple's inconsistent positions raise the possibility of inconsistent opinions from the Board and the Delaware court. And in these IPRs, Apple falsely alleged that Masimo withheld certain references from the examiner during prosecution, despite Apple having previously admitted that similar statements were false. Apple's pattern of presenting inconsistent and false arguments demonstrates a lack of candor towards the Board that justifies denial of institution.

Institution should also be denied because the Petition lacks merit. Apple fails to present patentability challenges under the construction it asserted to be correct in Delaware. And under any reasonable construction, other claim elements are also not disclosed and a POSITA would not have been motivated to make the asserted modifications.

II. BACKGROUND

A. Apple Falsely Represented Masimo's Prosecution of the '159 Patent

Apple falsely alleged that Masimo withheld references identified in an Apple IPR petition against a related patent from the Examiner during prosecution of the '159 Patent. Specifically, Apple alleged:

Masimo filed the application that issued as the '159 Patent ... on February 14, 2020 ... approximately six months *after* Apple filed IPRs challenging claims of genealogically related U.S. Patent No. 10,470,695 (“’695 Patent”).

Just 7 weeks later, on April 2, 2020, a Notice of allowance was issued, notably omitting any discussion of art applied in Apple’s IPRs, including art (e.g., Sarantos) on which the present Petition’s grounds are premised. ... Without bringing this omission to the attention of the examiner, Masimo paid the issue fee on April 21, 2020 ... in an apparent attempt to achieve issuance prior to the institution decision of the ’695 IPRs and allowed the patent to grant on July 28, 2020.

Pet., 2–3 (emphasis in original).³ But IPR2020-01722 and -01723 against the ’695 Patent were filed on ***October 2, 2020***—several months *after* the ’159 Patent issued on June 28, 2020. Apple thus had no basis for alleging that Masimo somehow omitted “any discussion of art applied in Apple’s IPRs.” And Apple had knowledge of those dates because it filed those petitions in October 2020. Apple also included the following additional false allegations:

- “Notably, on May 12, 2021, the Board endorsed the relevance of this prior art, finding a reasonable likelihood of unpatentability to exist. Still, Masimo said nothing.” Pet., 3.

³ All emphases in this Preliminary Response are added unless noted otherwise.

- “The ’159 Patent’s file history is without any indication that Masimo brought the prior art applied in this Petition to the examiner’s attention prior to allowance...” Pet., 4.
- “Masimo failed to cite the Sarantos reference applied in this Petition to the examiner, despite being in possession of Apple’s earlier IPR petitions challenging claims of the related ’695 Patent based on Sarantos.” Pet., 87.

But these events from the ’695 Patent IPRs took place nearly a year *after* the ’159 Patent issued in July 28, 2020. Masimo could not have “failed to cite” references identified in Apple’s IPRs filed *after* the ’159 Patent issued.

Masimo alerted Apple to these false statements on March 6, 2024. Afterwards, Apple labeled the false statements as “clerical” errors and sought to correct them without changing the Petition’s filing date via a 37 C.F.R. § 42.104(c) motion. The Board denied Apple leave to change these statements. EX3001. But because there was no briefing on the issue, the Board was not apprised of the fact Apple’s counsel knew or at least should have known that these allegations were false before filing the Petition.

First, the dates alone demonstrate that Apple’s statements were false. Second, before Apple filed this petition, Apple’s counsel made similar false statements in IPRs filed against a related patent. In 2022, Apple filed four IPRs challenging U.S. Patent No. 10,687,745 (the ’745 Patent), which shares the same specification as the ’159 Patent and which issued on June 23, 2020. *See* IPR2022-01291, -01292, -1465,

-01466. Apple’s petitions against the ’745 Patent similarly alleged that “Masimo filed the application that issued as the ’745 Patent ... approximately seven months after Apple filed IPRs challenging claims of related U.S. Patent No. 10,470,695” and that “Masimo failed to cite either the Sarantos or Venkatraman references applied in this Petition to the examiner, despite being in possession of Apple’s earlier IPR petitions challenging claims of the ’695 Patent based on those same references.” *See, e.g.*, IPR2022-01465, Paper 3 at 3, 77.

On September 9, 2022, Masimo’s counsel explained to Apple’s counsel that those statements were false because Apple filed its IPRs challenging the ’695 Patent *after* issuance of the ’745 Patent. *See* EX2030, 6–7. On September 10, 2022, Apple’s counsel acknowledged the error: “As you correctly noted, the date of issuance of the ’745 patent preceded the filing of IPR2020-01722 and -01723.” *Id.* at 5-6. On October 7, 2022, Apple filed corrected petitions in each of IPR2022-01291, -01292, -01465, and -01466 which removed those statements. *See, e.g.*, IPR2022-01465, Paper 10.

Masimo once again notified Apple about these false statements in March 2024. Apple offered the excuse that the statements “appear[] to have been inadvertently copy-pasted from an originally-filed version of a petition challenging the ’745 Patent.” EX2031, 4. But while the statements are similar to those in the ’745 Patent IPRs, none of the false statements in this Petition are identical. Rather,

the changes show that Apple revised the false statements about the '159 Patent. Apple even added ***bold italics*** emphasis on the false statements—which Apple never included in the '745 Patent IPRs. *See* Pet., 3 (“six months ***after*** Apple filed IPRs...”)(original emphasis). Thus, Apple’s false statements in this IPR (and three other concurrently filed IPRs against the '743 and '159 Patents) were not merely “clerical” error. Apple’s counsel owed a duty of candor and good faith to the Board. *See* 37 C.F.R. § 11.303(a)(1) (“A practitioner shall not knowingly ... [m]ake a false statement of fact or law to a tribunal...”); 37 C.F.R. §§ 11.18(b)(2)(iii) (by presenting a paper to the Board, a practitioner “is certifying that ... [t]he allegations and other factual contentions have evidentiary support”), 42.11(c), 42.12(a)(3). In this IPR Apple is represented by the ***same*** attorneys who acknowledged that similar statements in the '745 Patent IPRs were false. *See* EX2030 (listing counsel in email headers). Apple’s repeated use of statements known to be false demonstrates a lack of candor towards the Office that justifies denial of institution. *See* 37 C.F.R. §§ 42.11–42.12.

B. Overview of the Technology

Pulse oximetry is a method of noninvasively measuring the oxygen saturation levels of an individual’s arterial blood. EX1009, xv, 6; EX2002, ¶36. Pulse oximetry relies on the Beer-Lambert law, which allows the concentration of oxyhemoglobin and hemoglobin in blood to be calculated by measuring the

absorption of light at known wavelengths. *See* EX2002, ¶36; EX1001, 1:65-2:3; *see also* EX1009, 40.⁴ Pulse oximeters emit light of at least two wavelengths, typically red and infrared. EX2002, ¶36. Red and infrared wavelengths are chosen because hemoglobin absorbs more red light than oxyhemoglobin, while oxyhemoglobin absorbs more infrared light than hemoglobin. EX2002, ¶36. A detector measures the light after it has passed through the tissue and outputs a photoplethysmography (PPG) signal for each wavelength of light. EX2002, ¶¶37–38. The relative amounts of red and infrared light detected during systole and diastole (contraction and relaxation of the heart) can be used to calculate a ratio of ratios, which can then be mapped to an oxygen saturation (SpO₂) value indicating the proportional amount of hemoglobin carrying oxygen. EX2002, ¶38.

C. The '159 Patent

The '159 Patent, which claims priority to a provisional application filed July 2, 2015, is the result of inventor Ammar Al-Ali's research on pulse oximetry at the wrist from 2014 to 2015. EX1001, 2; EX2029, 248:24-249:8. The '159 Patent discloses sensor designs with various enhancements that improve signals typically obscured by noise. EX1001, 7:4-62, 8:54-9:10, 10:40-11:67, Figs. 7A-7B. Those

⁴ Unless stated otherwise, pincites generally refer to a document's original pagination.

enhancements improve measurement of oxygen saturation and other parameters during more difficult conditions and from more difficult sites like the wrist. *Id.* at 1:22-26, 2:39-3:3, 10:40-51; EX2002, ¶39.

Claims 1 and 19 recite novel sensors that measures from difficult locations like a user's wrist. EX2002, ¶40. The claims feature a "material positioned between the plurality of emitters and a tissue measurement site on a wrist of a user" and which changes the shape of light that is emitted from the LEDs from a "first shape" into a "second shape." The '159 Patent explains how using a material to change the shape of light improved measurement accuracy. Before the '159 Patent, pulse oximetry conventionally applied a two-dimensional analytical model to the three-dimensional space of the tissue measurement site. EX1001, 5:40-51. In this 2D model, a light source with negligible dimensions would be considered as a point source and the path of light as it penetrates the tissue would be considered as a line or vector, representing a two-dimensional construct. *Id.* at 5:62-65. Conventional wisdom was that using an optical point source would reduce the variability in the light pathlength, a variable in the Beer-Lambert law, which would lead to more accurate pulse oximetry measurements. *Id.* at 5:66-6:1. A study found, however, that the difference between the average pathlengths for red and infrared light affects the calibration curve for a pulse oximeter, thereby decreasing accuracy. EX1001, 6:1-20. Rather than irradiating tissue with a simple point source, Al-Ali departed from conventional

wisdom and applied a three-dimensional model by adding a material to change the shape of light emitted towards the user's tissue to irradiate a larger volume of tissue. *Id.* at 6:21-7:3; *see also* EX2002, ¶40. The increased light interaction resulted in more accurate oxygen saturation measurements. EX1001, 6:64-7:3; EX2002, ¶40.

In conjunction with the material that changes the shape of light, Claims 1 and 19 also feature additional structures designed to improve signal quality. EX2002, ¶41. The claims recite a “surface comprising a dark-colored coating” positioned between the photodiodes and the user's tissue. The patent explains that the use of a dark-colored coating can also address a “multiple scattering” problem where emitted light can reflect back and forth between the user's tissue and the sensor, leading to considerably longer photon pathlengths that affect the accuracy of the measurement. EX1001, 8:54-9:7; EX2002, ¶41. The claims also recite a “light block” which can prevent LED light from reaching the detectors before attenuation by the tissue. *See* EX1001, 15:51-54, 10:49-51, 11:10-20, Figs. 7A-7B; EX2002, ¶41.

The claimed inventions of the '159 Patent thus provide novel combinations of features that improve measurement accuracy of a user's physiological parameters, such as SpO₂, at the user's wrist. *See, e.g.*, EX1001, 10:40-51, Figs. 7A-7B; EX2002, ¶42.

Based on Al-Ali's research and the resulting '159 Patent inventions, Masimo developed a commercial medical-grade wrist-based pulse oximeter that is now sold

as the Masimo W1™ watch, pictured below. EX2029, 248:24-250:14; EX2002, ¶43.



The Masimo W1™ is the only product on the market that provides continuous oxygen saturation measurements at the wrist. *See* EX2002, ¶44. Notably, on November 17, 2023, the Masimo W1™ received FDA 510(k) clearance for over-the-counter and prescription use for oxygen saturation monitoring. *See* EX2032. As of today, Masimo is ***the first and only company in the world*** to have received FDA clearance for a pulse oximeter that measures continuously at the wrist.

D. Level of Ordinary Skill in the Art

Apple presents a relatively low level of ordinary skill in the art. Pet., 4. Masimo submits that Apple's low level of ordinary skill supports the patentability

of the claims. However, in the Delaware Litigation, Masimo’s expert presented a slightly different definition of the level of ordinary skill which includes education and/or experience with optical technologies. EX2002, ¶¶48–50. The difference between Masimo’s definition and Apple’s definition does not impact Apple’s patentability challenges here. *Id.* at ¶51.

III. CLAIM CONSTRUCTION

A. Apple Proposed a Construction of “Opening” Fundamentally Incompatible with Its Obviousness Argument

Apple’s inconsistent claim construction positions here and in the Delaware Litigation warrant denial. The Board’s rules “place an affirmative burden on petitioners to ‘set forth: ... how the challenged claim is to be construed.’” *OrthoPediatrics Corp. v. K2M, Inc.*, Case IPR2018-01548, Paper 9, at 10 (March 1, 2019) (quoting 37 C.F.R. 42.104(b)(3)). “This burden continues by requiring petitioners to adequately explain ‘[h]ow the construed claim is unpatentable.’” *Id.* (quoting 37 C.F.R. § 42.104(b)(4)).

The Petition fails to satisfy these requirements because it does not explain how the prior art meets Apple’s claim construction in the Delaware Litigation. Three days after filing this Petition, Apple served its noninfringement expert report in the Delaware Litigation where Apple argued that the term “opening” in independent

Claims 1 and 19 of the '159 Patent means “empty space.” *See* EX2037, ¶465.⁵ Apple argued its construction is based on a POSITA’s understanding of the “ordinary meaning” of the term, as well as its expert’s analysis of the '743 Patent specification (which is identical to the '159 Patent specification). *See* EX2037, ¶¶465, 479–482; *see also* EX2002, ¶52.

Apple argued that under its construction of “opening,” an opening that is filled with solid material, “such as closed windows and solid lenses” cannot satisfy the claim limitation. EX2037, ¶479. Apple’s Delaware expert explained: “[A]n opening is an empty space. Especially in the field of optics, light traveling through space in an opening is not equivalent to light traveling through a material, such as a window.” EX2037, ¶482. Apple relied on that construction for noninfringement in Delaware but did not discuss or apply that construction in this IPR. *See* 37 C.F.R. § 42.104(b)(3)–(4) (Petition must identify “[h]ow the challenged claim is to be construed” and “[h]ow the construed claim is unpatentable.”); *see also* EX2002, ¶53. Instead, for this Petition, Apple argued that “no claim terms need be construed.”

⁵ While the unredacted portions of this excerpt of Apple’s Delaware expert report primarily reference the related '743 Patent, Apple’s expert also applied this construction to the '159 Patent claims. *See, e.g.,* EX2037, ¶481 (citing both the '743 and '159 Patent specifications to support Apple’s “opening” construction).

Pet., 5. But, in the Iwamiya-Sarantos combination, Apple identified Iwamiya’s “optical filter 17”—a material that is not empty space—as the claimed “opening.” Pet., 23–24. Under Apple’s Delaware claim construction, the prior art does not satisfy the claims. EX2002, ¶54. Apple thus violates a fundamental tenet of patent law—the claims “must be interpreted and given the same meaning for purposes of both validity and infringement analysis.” *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001).

Moreover, Apple’s inconsistent claim construction positions creates a likelihood that the decision in the Delaware Litigation and the decision in this IPR will lack “uniformity” and undermine the “predictability” of the ’159 Patent’s claim scope and the “integrity of the patent system” overall. *See Kiosoft Techs., LLC v. Techtrex, Inc.*, IPR2021-00086, Paper 12 at 16 (Mar. 22, 2021) (citing *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. at 51,342). Apple relies on two contrary claim constructions for the term “opening”: one in the Delaware Litigation and another this IPR. To support each construction, Apple relies on its experts’ conflicting understanding of the “ordinary” meaning of the term. *See* EX1003, ¶23; EX2037, ¶465. Thus, if the Delaware court and the PTAB were to both adopt Apple’s conflicting constructions, the scope of the ’159 Patent would be entirely unclear. This risk provides an independent reason the Petition should be denied. *See*

Hologic, Inc. v. Enzo Life Sciences, Inc., IPR2018-00019, Paper 17 at 6-9 (PTAB Apr. 18, 2018) (denying institution for failing to satisfy 37 CFR §42.104(b)(3)-(4) because while “Petitioner was free to advocate unpatentability under a claim construction it considered to be correct[,] [i]t did not do so.”); *Jiawei Tech. Ltd. v. Simon Nicholas Richmond*, IPR2014-00937, Paper 22 at 7-8 (PTAB Dec. 16, 2014) (denying institution because the petition did not “explain how the challenged claims are to be construed” and, therefore, “has not demonstrated a reasonable likelihood of success”); *see also Facebook, Inc. v. Sound View Innovations, LLC*, IPR2017-00998, Paper 13 at 17–18 (Sept. 5, 2017) (denying institution due to petitioner’s lack of candor in failing to disclose its inconsistent claim construction position in parallel litigation).

B. “the plurality of detectors are arranged in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site bounded by the circular shaped light block” (Claim 14)

Claim 14 requires a plurality of detectors that are “arranged in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site bounded by the circular shaped light block.” A POSITA would have understood from the prosecution history of a parent application (App. No. 15/195,199) (“’199 Application”) that arrangements of two or three detectors are excluded from the scope of Claim 14. EX2057, 322; EX2002, ¶¶55–56. The Board previously adopted Masimo’s construction of a nearly identical limitation in

Claim 15 of the related '745 Patent. *See* EX2035, 109–112 (construing “a plurality of photodiodes...arranged in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site encircled by the light block” to require more than three photodiodes). The Board should continue to apply this understanding to Claim 14 of the '159 Patent. *See* EX2002, ¶56.

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY INSTITUTION

Apple waited until the one-year statutory deadline to file this Petition. In the parallel Delaware Litigation involving the same patent, Apple successfully obtained an accelerated schedule. EX2011; EX2012, 9:24-10:9; EX2013 (original schedule); EX2014 (amended schedule). Under that schedule, the Delaware Litigation has already progressed through fact and expert discovery, dispositive motions, and is ready for trial. Apple fails to explain why it delayed in filing this Petition until this late stage of the Delaware Litigation. Because Apple waited so long, institution here would be inefficient and contrary to the goals of the AIA. Apple’s unexplained delay in filing the Petition is one of many reasons why the *Fintiv* factors favor denying institution under § 314(a).

Fintiv sets forth six non-exclusive factors for determining “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential)

(“*Fintiv*”). Under those factors, the advanced stage of the Delaware Litigation and significant investment in it support denying institution. Apple also inexplicably delayed filing this Petition until the last day possible, when it had previously filed petitions based on the same prior art combinations over a year ago. Apple also did not inform the Board that under its proposed claim construction, the prior art does not disclose the claim limitations. Apple’s lack of candor towards the Board, including its repeated submission of false information and presentation of inconsistent arguments to the Board and the district court further weigh in favor of denial. Thus, the Petition needlessly multiplies the disputes between the parties and invites inconsistent decisions. The *Fintiv* factors weigh heavily in favor of denying institution.

A. Factor 1: No Stay Has Been Sought and None Is Likely

Apple has neither sought a stay for the ’159 Patent in the Delaware Litigation nor suggested it intends to do so. In fact, Apple *opposed* Masimo’s motion to stay Apple’s patent claims pending Masimo’s instituted IPRs. EX2010. Apple represented that “this case is at a late stage,” that “trial will likely occur months before the PTAB issues Final Written Decisions in [Masimo-filed] IPRs, the first of which is not due until September 20, 2024,” and that it is seeking “trial *at the Court’s earliest available date.*” *Id.* at 2, 11. Thus, this factor favors denying institution.

See, e.g., Mylan Labs. Ltd. v. Janssen Pharmaceutica NV, IPR2020-00440, Paper 17 at 14 (PTAB Sept. 16, 2020).

B. Factor 2: The Court’s Trial Date Is Long Before the Projected Statutory Deadline

To argue against denial, Apple relies on a “statistically indicated December, 2025 district court trial date.” Pet., 77. But Apple ignores the accelerated schedule that Apple obtained in the Delaware Litigation. EX2011; EX2012, 9:24-10:9; EX2013 (original schedule); EX2014 (amended schedule). And under that accelerated schedule, the Delaware Litigation has already proceeded through fact and expert discovery, dispositive motions, and is ready for trial. *See infra* Section IV.C. Under that accelerated schedule, trial will likely occur long before Apple’s “statistically indicated” date. Indeed, just three weeks after filing this Petition, Apple represented to the District Court that “*trial will likely occur months before the PTAB issues [FWDs] in [Masimo-filed] IPRs, the first of which is not due until September 20, 2024.*” EX2010, 2. Apple’s arguments about the trial date undermine its statistical approach here and favor denial. *See, e.g., US Venture, Inc. v. Sunoco Partners Marketing & Terminals LP*, IPR2020-00728, Paper 10, 9 (PTAB Oct. 1, 2020); *Supercell Oy v. GREE, Inc.*, IPR2020-01619, Paper 15, 10-11 (PTAB Mar. 24, 2021).

Apple also relies on a Masimo IPR petition that cited time-to-trial statistics. Pet., 77. But Masimo diligently filed that petition at the outset of the Delaware

Litigation when statistics were the only timing data available. Indeed, Masimo filed its petition in February 2023—two months before the district court ordered a schedule. *Masimo Corp. v. Apple Inc.*, IPR2023-00634, Paper 1, 108 (PTAB Feb. 27, 2023). Unlike Masimo, Apple filed this Petition on the last possible day, just weeks before the parties would complete expert discovery and dispositive motions. The Delaware Litigation is now ready for trial. Under these circumstances, the stage of the case and the accelerated case schedule support denial. *See, e.g., US Venture*, Paper 10, 9.

Even if statistics are considered, Apple’s generic and outdated statistics (EX1060, 14) should be rejected. The latest statistics show an average time-to-trial of approximately 34.9 months for patent cases in the District of Delaware in the year preceding the Petition. EX2015. Assuming Judge Hall takes over as district court judge in the pending cases she was previously assigned as magistrate judge, she would still preside over approximately 13% fewer cases than the other district judges in Delaware. *Compare* EX2016 *with* EX2017. Adjusting the time-to-trial based on Judge Hall’s case load (i.e., from 34.9 months to 30.4 months), the expected trial date would occur in May 2025—approximately two months before the deadline for a FWD here. Thus, the pertinent statistics favor denial. *See, e.g., Vector Flow, Inc. v. HID Global Corp.*, IPR2023-00353, Paper 8, 20 (PTAB July 17, 2023).

C. Factor 3: The Parties' Significant and Continuing Investment in the Litigation and Apple's Lack of Diligence Weighs Against Institution

The amount and type of work already undertaken in the Delaware Litigation by the District Court and parties dwarfs Apple's investment in this Petition (and even Apple's collection of petitions) by orders of magnitude. In the Delaware Litigation, the parties and district court have already completed:

- 1) fact discovery, including millions of pages of document production, approximately fifty interrogatories, and dozens of requests for admission per side;
- 2) more than *seventy-five fact depositions*;
- 3) dozens of third-party subpoenas and numerous third-party depositions;
- 4) infringement and validity contentions (including, for the '159 Patent and related '743 Patent, Apple's 6,251 pages of initial invalidity contentions involving 24 references, Masimo's 265 pages of responses to initial invalidity contentions, Apple's 6,878 pages of final invalidity contentions, and Masimo's 315 pages of responses to final invalidity contentions);
- 5) claim construction, including a four-hour hearing conducted over six months ago;
- 6) expert discovery, including **33** total reports exchanged totaling ***over 12,600 pages***, including the following reports specific to the '159 and '743 Patents:

- a. For validity of the '159 Patent and related '743 Patent:
 - i. Dr. Sarrafzadeh's (Apple) 429-page opening report;
 - ii. Dr. Madisetti's (Masimo) 165-page rebuttal report;
 - iii. Dr. Zavislan's (Masimo) 35-page rebuttal report;
 - iv. Dr. Sarrafzadeh's (Apple) 167-page reply report;
 - b. For infringement of the '159 Patent and related '743 Patent:
 - i. Dr. Madisetti's (Masimo) 691-page opening report, including 176 pages of claim charts relating to the '159 and '743 Patents;
 - ii. Dr. Zavislan's (Masimo) 223-page opening report;
 - iii. Dr. Sarrafzadeh's (Apple) 395-page rebuttal report;
 - iv. Dr. Madisetti's (Masimo) 488-page reply report, including over 98 pages dedicated to the '159 and '743 Patents;
 - v. Dr. Zavislan's (Masimo) 94-page reply report.
- 7) more than *twenty-five expert depositions*, including depositions of Dr. Madisetti, Dr. Zavislan, and Dr. Sarrafzadeh for the '743 and '159 Patents; and

8) more than twenty motions and dozens of hearings, including summary judgment and *Daubert*.⁶

When, as here, final contentions are complete and fact and expert discovery has already closed long before the Board makes an institution decision, “the third *Fintiv* factor weighs heavily in favor of discretionary denial.” *See, e.g., Roku, Inc. v. IOENGINE, LLC*, IPR2022-01554, Paper 11 at 12 (May 5, 2023) (“*Roku*”); *see also Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 14 (PTAB May 13, 2020) (“*Fintiv IP*”) (level of investment and effort already expended in the District Court favors denial).

Apple trivializes the parties’ investment as shared “equally by both parties.” Pet., 79. But the third *Fintiv* factor considers the overall investment in the parallel litigation by the parties and court regardless of whether the parties share that investment. *Fintiv* at 9. Apple improperly disregards the District Court’s investment in the Delaware Litigation. *Id.*

Incredibly, Apple argues that its “substantial investment *in petitions*...should counterbalance—and frankly *outweigh*—the resources invested in the co-pending District Court litigation.” Pet., 79. But Apple has aggressively litigated the

⁶ Apple refuses to allow confidential information from the Delaware Litigation to be used here.

Delaware Litigation with dozens of outside counsel. As an example of the magnitude of its investment in the Delaware Litigation, Apple had seven attorneys argue claim construction and brought so many additional attorneys to the hearing that the courtroom ran out of seats. EX2018, 4. Masimo’s investment in the Delaware Litigation also drastically exceeds Apple’s investment in petitions. *See, e.g.*, EX2019 (explaining Masimo’s over \$100M investment in Apple litigation). Apple’s investment in petitions falls far short of the overall investment by Apple, Masimo, *and* the District Court that this factor considers.

Apple also refers to its investment in responding to petitions for the “10 patents asserted” by Masimo in the Delaware Litigation. Pet., 79. But this factor considers investment “*related to the patent at issue in the petition.*” *Fintiv* at 9-10. Therefore, Apple’s investment in IPRs challenging *other* patents does not support instituting this Petition.

Further, Apple’s petitions for five of those other patents challenged the “[Masimo] patents reasserted from ITC litigation.” Pet. 79. And Apple omits that it received refunds for eight such petitions on the ITC patents because the PTAB did not institute review. *See* EX2020–EX2027 (granted refund requests in IPR2022-1271-IPR2022-1276, IPR2022-1292, and IPR2022-1466). Apple’s unrelated petitions do not support instituting this Petition.

Apple asserts that its “substantial investment” in the Petition and diligence should weigh in favor of institution. Pet., 79, 78 n.8. But Apple did not substantially invest in this Petition nor was it diligent in preparing this Petition. Rather, Apple openly admitted that it copied arguments from IPR petitions against the ’745 Patent that it filed more than a year prior. Pet., 74–75 (“[The Petition] applies largely the same prior art to similarly address claims that closely resemble those of the ’745 patent for which institution was recently granted.”). Indeed, the Iwamiya-Sarantos combination presented here is the same combination that Apple briefed in 2022 in ITC Inv. No. 337-TA-1276 and IPR2022-01291 and -01465. Reiterating prior arguments does not demonstrate a “substantial investment.”

The difference between this Petition and the previous ’745 Patent IPR petitions is that Apple substituted Venkatraman—a tertiary reference applied in prior petitions—for new references Han and Utter. *See, e.g.*, IPR2022-01291, Paper 51 (Second Corrected Petition) at 2 (Iwamiya-Sarantos-Venkatraman combination). But to be clear, Apple did so because it intends to use Venkatraman as prior art in the Delaware Litigation. *See* EX1068 at vi (relying upon Venkatraman as a primary reference against the ’159 Patent); EX1066 (stipulating that Apple will not use Iwamiya, Sarantos, Han, or Utter in the Delaware Litigation).

Because Apple’s Petition merely copied previously existing arguments, Apple could have prepared and filed this Petition many months ago. Instead, Apple chose

to wait until the one-year-bar date to file the Petition. Apple offers no excuse, let alone a legitimate reason, for the delay. That delay weighs in favor of denying institution. *See Next Caller Inc. v. TrustID, Inc.*, IPR2019-00961, Paper 10 at 15–16 (Oct. 16, 2019) (petitioner’s unexplained delay when it was aware of the prior art “well before” filing the petition favored denying institution).

Moreover, Apple gained a tactical advantage by delaying its Petition until the last possible day. Apple’s Petition is based on arguments it presented over a year ago in IPR2022-01291 and IPR2022-01465. Apple could have filed the current Petition much earlier but waited until *after* all of the briefing and oral arguments concluded in IPR2022-01291 and -01465 and *after* receiving Masimo’s responses to its invalidity contentions in the Delaware Litigation. Apple thus sought a clear tactical advantage in delaying its Petition, which further weighs in favor of denying institution. *See Apple Inc. v. Optis Cellular Tech., LLC*, IPR2020-00465, Paper 13 at 16 (Sept. 17, 2020) (denying institution and recognizing a petitioner’s tactical advantage from delay is a consideration under *Fintiv* factor 3).

Apple stipulates it will not pursue in the Delaware Litigation “any ground of invalidity that utilizes any of the prior art asserted in this petition.” Pet., 79–80. Apple argues that stipulation is somehow “broader” than a *Sotera* stipulation. *Id.*, 80. But that is incorrect. In a *Sotera* stipulation, a party agrees not to pursue in district court “any grounds that could have reasonably been raised in the petition.”

EX1061, 7-8. *Sotera* stipulations thus mitigate inefficiency and a risk of conflicting decisions. *Id.* It is undisputed that Apple could have reasonably raised the invalidity grounds it asserts in Delaware in this IPR. EX2028. For example, Apple is maintaining obviousness grounds in the Delaware Litigation based on a combination of Ackermans and Savant and/or Venkatraman. *See* EX1068, 4–5. But Apple actually raised those same grounds in other IPR petitions filed over a year ago against a related patent. *See generally* EX2033, EX2034. Apple’s narrow stipulation is not a *Sotera* stipulation and allows Apple to pursue different invalidity theories in the district court and this IPR. Such a result is the opposite of what a *Sotera* stipulation is designed to accomplish.

Apple’s stipulation provides nothing beyond the parties’ agreement on issue narrowing in the parallel case. In the Delaware Litigation, Apple’s initial invalidity contentions relied on the same Iwamiya and Sarantos references presented here. *See* EX2041, 34–35. But Apple has since abandoned its invalidity arguments based on the same primary reference asserted here. EX1068, 5–6. Thus, Apple’s illusory stipulation imposes no real restriction on Apple and offers no real value to the District Court or the PTAB. Instead, Apple’s stipulation merely confirms that Apple seeks to enlarge the proceedings by re-raising the arguments it abandoned in the Delaware Litigation. That sort of inefficiency is contrary to the purpose of IPRs. EX1061, 7.

Under the circumstances, the third *Fintiv* factor heavily weighs in favor of denying institution.

D. Factor 4: Validity Issues Overlap with the Delaware Litigation and the Board Has Previously Created Conflicting Decisions

Apple argues that the Petition addresses claims that are not asserted in the Delaware Litigation, but offers no further analysis. Pet., 81. The “existence of non-overlapping claim challenges” can weigh “for or against exercising discretion to deny institution,” depending on the circumstances. *Fintiv* at 13 (citing *Next Caller Inc. v. TrustID, Inc.*, IPR2019-00961, Paper 10 at 14 (Oct. 16, 2019) (denying institution where petition addressed more claims than district court litigation because all claims are directed to the same subject matter and petitioner did not argue it would be harmed if institution were denied)). Like in *Next Caller* the non-overlapping claims in this Petition are directed to the same subject matter as the asserted claims in the Delaware Litigation and Apple did not identify any significant differences between them. Moreover, Apple will not be harmed if institution is denied on the non-overlapping claims because Masimo already narrowed its claims in the Delaware Litigation.

Apple further argues factor 4 disfavors denial because there is an “absence of meaningful overlap between the District Court Litigation and IPR” due to its stipulation. Pet., 81. First, as explained with respect to factor 3, that is incorrect because Apple’s stipulation is not a *Sotera* stipulation.

Second, there is ***significant overlap*** in the issues between the District Court Litigation and this Petition. Apple focuses solely on the prior art references being different but ignores that both proceedings involve the same issues of reasonable expectation of success for determining oxygen saturation at the wrist and objective indicia of nonobviousness. Specifically, Claim 8—which is asserted against Apple in Delaware—requires determining oxygen saturation at the wrist. *See* EX1001, Claim 8 (base Claim 1 recites “a tissue measurement site on a wrist of a user” and Claim 8 recites “oxygen saturation”). The parties have extensively litigated this issue across multiple forums, including the ITC and other IPRs. The same issue will also be litigated in the Delaware Litigation. Masimo’s expert has already provided opinions in the Delaware Litigation regarding reasonable expectation of success and objective indicia based on Apple documents and witness testimony. EX2002, ¶23. If this IPR were instituted, a large portion of this proceeding will be dedicated to obtaining evidence from the Delaware Litigation (because Apple has again refused to cooperate on cross-use of documents between the Delaware Litigation and the IPRs) and presenting substantially similar arguments regarding reasonable expectation of success and objective indicia.

Factor 4 weighs strongly in favor of denying institution because there is significantly more than a mere “possibility of conflicting decisions” that the Delaware Litigation and the Board would reach conflicting outcomes on the same

issue of validity. *Fintiv* at 12. Rather, the Board has already come to an inconsistent decision on this issue in the past. During the ITC investigation, the ALJ found—based on Apple’s documents and engineer testimony—that there was no reasonable expectation of success in determining oxygen saturation at the wrist and that Apple’s engineers were skeptical that it could be done. EX2043, 219-220. The ALJ came to that conclusion after receiving all of the evidence, including hearing live testimony from Apple’s engineers, and evaluating their credibility. Yet, in IPR2022-01291 and -01465, the Board directly disagreed with the ALJ’s original findings.⁷ *See* EX2035, 102 (“We also disagree with the ITC’s conclusion that Apple’s engineers express[ed] skepticism regarding the implementation of pulse oximetry *in a wrist-worn device.*”) (emphasis in original). Thus, similar claims of a related patent have already been held valid in one forum and not patentable in another. Instituting this Petition will compound the inconsistencies.

E. Factor 5: The Delaware Litigation Involves the Same Parties

The fifth factor weighs against institution because the Petition and Delaware Litigation involve the same parties. *See, e.g., Supercell OY v. Gree, Inc.*, PGR2020-00039, Paper 14 at 18 (PTAB Sept. 14, 2020).

⁷ Masimo is appealing the Board’s incorrect findings and conclusions in IPR2022-01291 and -01465.

F. Factor 6: Other Considerations Favor Denying Institution

Several considerations under Factor 6, including Apple’s lack of candor towards the Office and gamesmanship all justify denial of institution.

First, the Petition fails to present a compelling, meritorious challenge. Apple argues that no claim constructions are necessary in this IPR, thus leaving the terms to their plain and ordinary meaning. Pet., 5. But Apple did not inform the Board that it has argued in the Delaware Litigation that the plain and ordinary meaning of “opening” is “empty space.” *See supra* Section III.A. Under Apple’s own construction, Apple’s asserted references do not disclose the claim limitations. This distinguishes Apple’s current IPRs against the ’159 Patent from Apple’s prior IPRs against the ’745 Patent because Apple is now advancing obviousness theories that it knows would fail under what Apple believes to be the correct construction.

Second, Apple’s decision to advance mutually exclusive claim construction positions in the Delaware Litigation and in this IPR—without informing the Board—creates a strong likelihood of inconsistent decisions between the two forums that would “undermine the ‘predictability’ of the [’159 Patent’s] claim scope and the ‘integrity of the patent system.’” *Kiosoft*, IPR2021-00086, Paper 12 at 16 (“[R]egardless of the Petition’s merits, the potential problems inherent in the inconsistent claim constructions set forth by Petitioner between the Petition and its proposals at the district court warrant us to find that factor 6 weighs in favor of

denying institution.”). For example, if the Board were to institute this IPR, and thus adopt an apparent construction of “opening” that encompasses an opening filled with a solid material, Apple would still be free to argue in the Delaware Litigation that a device that has an opening filled with a solid material does **not** satisfy the claim language. The ’159 Patent claims are not a “nose of wax, which may be turned and twisted in any direction” as Apple sees fit. *Pratt & Whitney Co. v. United States*, 345 F.2d 838, 846–47 (Ct. Cl. 1965) (citation omitted). Yet, that is what Apple seeks to do here, by presenting mutually exclusive constructions where the claim term “opening” simultaneously encompasses and excludes openings that are filled with solid material.

Third, Apple’s conduct in this and related proceedings demonstrates a lack of candor towards the Board that further justifies denial of institution. As discussed above, Apple has repeatedly levied objectively false allegations against Masimo, despite its attorneys being on notice that similar statements were false. *See supra* Section II.A. Under the Board’s rules, Apple’s misrepresentation of the facts can justify dismissal of the petition. *See* 37 C.F.R. § 42.12(a)–(b). Given the repeated pattern of conduct, such a dismissal is warranted here.

In related IPRs against the related ’745 Patent, Apple also misinformed the Board regarding reasonable expectation of success for determining oxygen

saturation at the wrist and related objective indicia of nonobviousness.⁸ Specifically, in IPR2022-01291, Masimo presented Apple engineer testimony and engineering documents demonstrating that a POSITA would not have had a reasonable expectation of success in determining oxygen saturation at the wrist as of the July 2015 priority date (the same priority date for this related '159 Patent). *See* EX2035, 70–107. In response, Apple argued that Apple’s “engineers did not testify at the ITC from the perspective of a POSITA, and indeed, ***there is no evidence*** that the engineers ***were even aware*** (as a POSITA would have been) of the trove of prior art references and studies that had established the feasibility of determining oxygen saturation at the wrist before the '745 Patent.” EX2039, 20. In response the Board found “the engineers were not asked to address the specific issue presented here, which is whether a person of ordinary skill in the art would have reasonably expected success in determining oxygen saturation at the wrist at all.” EX2035, 102.

⁸ If instituted, this IPR will involve the same issue because Claim 8 of the '159 Patent, like Claims 9 and 18 of the '745 Patent, recites oxygen saturation determinations at the wrist.

But Masimo has identified Apple's own documents showing that Apple's representation was false.⁹ Masimo identified these documents with specificity to Apple's Delaware Litigation counsel. Despite its duty of candor in this IPR, Apple has thus far refused to permit the use of these documents in this IPR.

In sum, Apple's repeated conduct of presenting false allegations and directly contradicting arguments between the Delaware Litigation and this IPR demonstrate a lack of candor towards the Board. Factor 6 therefore weighs against institution. Under the totality of the circumstances, the Board should exercise its discretion to deny institution.

V. APPLE DOES NOT DEMONSTRATE OBVIOUSNESS OF ANY CLAIMS OF THE '159 PATENT

Apple presents three grounds of obviousness. For all challenged claims, Apple relies on a combination of Iwamiya and Sarantos with or without other additional references. *See* Pet., 1. These grounds fail to demonstrate obviousness of any claim.

⁹ Apple made that representation at a time when Masimo was no longer permitted to introduce new evidence into the record. *See* EX2040, 3 (denying Masimo's request to submit new evidence with sur-reply).

A. The Iwamiya-Sarantos Combination Fails to Disclose Limitations [1.4]–[1.5] and [19.5] Under Both Parties’ Claim Constructions

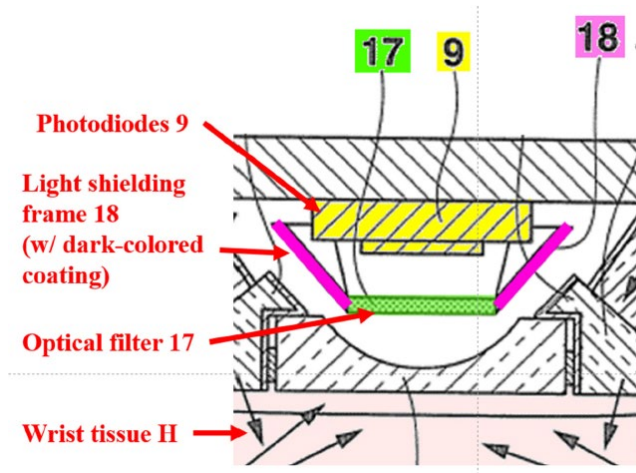
Claims 1 and 19 both require “a surface comprising a dark-colored coating, the surface positioned between the plurality of detectors and the tissue when the physiological monitoring device is in use, wherein an *opening* defined in the dark-colored coating is configured to allow at least a portion of light reflected from the tissue to *pass through the surface*.”¹⁰ However, the Iwamiya-Sarantos combination does not disclose the “opening” under Apple’s Delaware claim construction and it does not allow light to “pass through the surface” under any construction. *See* EX2002, ¶59.

1. An Optical Filter Is Not an “Opening” Under Apple’s Delaware Construction Because It Is a Solid Material

Apple relies on Iwamiya’s optical filter 17 as the “opening.” Pet., 23–24. But under Apple’s Delaware construction of “opening,” the optical filter 17 is not “empty space.” Rather, the optical filter is a solid material. EX2002, ¶60.

Apple’s comparison of the Iwamiya-Sarantos combination to certain claim elements is illustrated in the following diagram from the Petition:

¹⁰ Apple splits this limitation into [1.4] and [1.5] for Claim 1 but identifies it as a single limitation [19.5] for Claim 19.



Pet., 24 (Apple’s annotations of EX1004, Fig. 4); *see also* EX2002, ¶61. Apple identifies Iwamiya’s “light shielding frame 18” as the recited “surface.” *See* Pet., 21 (“[T]he Iwamiya-Sarantos combination includes a ‘light shielding frame 18’ (the claimed ‘surface’) surrounding the photo diodes/light receiving units 9, as taught by Iwamiya ... with a dark-colored coating, as taught by Sarantos”); *id.* at 65 (Claim 19 argument cross-referencing Claim 1 argument). Apple argues that a POSITA would have coated Iwamiya’s light shielding frame 18 with a dark-colored coating from Sarantos. *Id.* at 21; *see also id.* at 9. Finally, Apple points to “an optical filter 17” which is “mounted on the lower side of a light shielding frame 18” as the claimed “opening.” Pet., 23–24 (quoting EX1004, 8:39–42).

But as the quoted portion of Iwamiya confirms, the optical filter 17 is a solid structure mounted on the light shielding frame 18—it is not an “empty space.” EX1004, 8:39–42; EX2002, ¶62. Apple’s Delaware expert opined: “A POSITA would not regard solid material as an ‘opening.’” EX2037, ¶465. He further

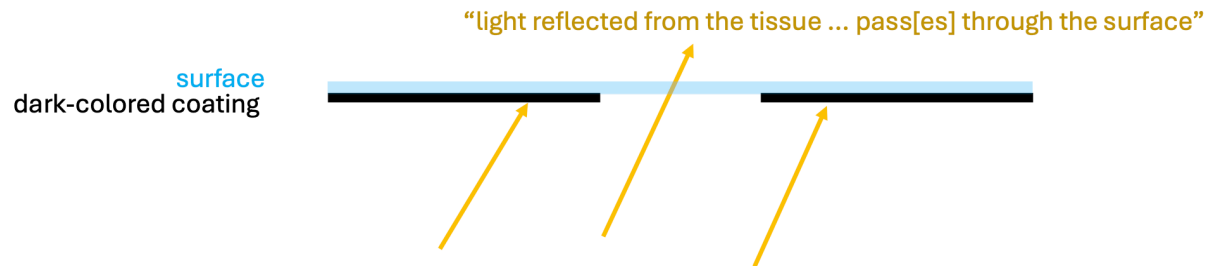
emphasized that “[m]aterial, such as closed windows and solid lenses, are the opposite of an ‘opening’” and that “[s]tretching the claim term ‘opening’ to encompass a closed window as an equivalent would vitiate the requirement of an ‘opening.’” *Id.* at ¶479; *see also id.* at ¶¶476–477. The optical filter 17 is a solid material and thus does not satisfy Apple’s Delaware construction. EX2002, ¶62. Apple does not contend otherwise.

2. **The Iwamiya-Sarantos Combination Does Not Have an “Opening Defined in the Dark-Colored Coating” Configured to Allow Light to “Pass Through the Surface”**

Even if Apple’s Delaware construction is not considered, the Iwamiya-Sarantos combination does not disclose an opening configured to allow light to “pass through the surface.” Claims 1 and 19 require “a surface comprising a dark-colored coating ... wherein an opening defined in the dark-colored coating is configured to allow at least a portion of light reflected from the tissue to pass through the surface.” Apple relies on Iwamiya’s light shielding frame 18 as the “surface” and a separate structure, Iwamiya’s optical filter 17, as the “opening.” *See* Pet., 21, 23-24. But that light shielding frame does not allow any light to pass through its surface. EX2002, ¶63.

Apple failed to identify an “opening defined in the dark-colored coating” configured to allow light to “pass through the surface.” EX2002, ¶¶63–64. Apple agrees that this limitation requires that the dark-colored coating is on the “surface.”

See Pet., 9 (“[A] POSITA would have been motivated to implement Iwamiya’s light shielding frame 18 to include a black or opaque dark-colored coating (as taught by Sarantos) such that the resulting **coated** light shielding frame has improved characteristics....”); *see also id.* 21. But Apple failed to identify any “opening” in the dark-colored coating on the surface it identified (light shielding frame 18). Instead, Apple relies on the optical filter, a separate structure different from the light shielding frame, as the “opening.” *See* EX1004, 8:38–42 (“[A]n optical filter 17 is disposed in a state where the optical filter is mounted on the lower side of a light shielding frame 18 to surround the light receiving unit 9.”); EX2002, ¶64. Apple does not even allege that light passes through the light shielding frame and instead argues that the light passes through the optical filter. Pet., 21, (“Light reflected from the tissue passes **through optical filter** 17 surrounded by the light shielding frame 18 to reach the detectors 9.”), 24 (“Iwamiya describes that the ‘optical filter 17 is configured to transmit light ... and thus is configured to allow at least a portion of light reflected from the tissue to pass through this surface to the photodiodes 9.’”). But the plain language of the claim requires that light “pass through the surface”—*i.e.*, **through** the light shielding frame, as shown below. EX2002, ¶64.



"a **surface** comprising a **dark-colored coating**, the surface positioned between the plurality of detectors and the tissue when the physiological monitoring device is in use, wherein an opening defined in the dark-colored coating is configured to allow at least a portion of **light reflected from the tissue to pass through the surface**"

EX2002, ¶64. Apple's allegation that the light shielding frame "surrounds" the photodetector fails to show that any light passes through that surface. *Id.* Thus, Apple's proposed combination does not satisfy the claim limitation.

B. A POSITA Would Not Have Been Motivated to Combine Iwamiya and Sarantos

Even if the proposed Iwamiya-Sarantos combination satisfied limitations [1.4], [1.5] and [19.5]—which it does not under *both* parties' positions—a POSITA would not have been motivated to make the combination. EX2002, ¶65. Apple's Petition presents largely the same arguments regarding motivation to combine that it presented in IPR2022-01291 and IPR2022-01465. And although the Board previously found such a motivation in IPR2022-01291 with respect to the '745 Patent, the Board's finding was, respectfully, in error.

The parties agree that Iwamiya does not disclose a "surface comprising a dark-colored coating." Pet., 11 ("Iwamiya is silent as to the material or coating used to implement the light shielding frame 18...."); EX2002, ¶66. Instead, Apple had to

propose adding a dark-colored coating from Sarantos onto the light shielding frame 18 in Iwamiya. *See* Pet., 7–13, 21–23. Apple argues a POSITA would have added such a dark-colored coating to the light shielding frame to block light. *See* Pet., 9 (arguing the combination would “improve[] characteristics for shielding the photodiodes from stray light,” “limit[] reflections” and “block light”); *see also id.* at 21 (“to shield the photodiodes from stray light”).

But Iwamiya’s light shielding frame 18, as the name confirms, is already a light shielding material—*i.e.*, it is opaque to light. EX2002, ¶67. That includes any material that would block light, including reflective materials, white materials, red materials, or any other color so long as it is opaque. *Id.* In fact, a POSITA would understand that the frame **cannot** be transparent or translucent because it would not shield light.¹¹ *Id.* The relevant question for obviousness then, is whether a POSITA, who already understands that the light shielding frame is opaque, would have been motivated to further **add** a layer of dark-colored coating to it. *See id.*

¹¹ In IPR2022-01291, the Board incorrectly suggested that the light shielding frame 18 could be a translucent or transparent material “because Iwamiya does not limit the material or structure to be used in light shielding frame 18....” EX2035, 40. A POSITA would understand that the frame **cannot** be translucent or transparent because such a material does not shield light. EX2002, ¶70.

The Board’s decision in IPR2022-01291 addressing this argument erred because it focused on the wrong question for motivation to combine. There, the Board found that Iwamiya “provides no detail concerning the *structural* configuration of frame 18” and “simply identifies the frame as ‘a light shielding frame,’ which is a functional description apart from the word ‘frame.’” EX2035, 38 (original emphasis). The Board then concluded that “Iwamiya leaves it to a [POSITA] to choose a material or structure to incorporate within frame 18 to shield light away from reaching light receiving unit 9 without passing through optical filter 17” and that Sarantos’ disclosure of a light-shielding material “is invited by Iwamiya’s disclosure, rather than assuming a problem in Iwamiya that does not exist....” *Id.* In other words, the Board assumed that “Iwamiya leaves it to a [POSITA] to choose a material or structure to incorporate within frame 18 to shield light away” and considered whether a POSITA would be motivated to form the light shielding frame 18 with Sarantos’ “in-mold label” or “painted or silk-screened mask.” *Id.*; *see also* EX2002, ¶68.

That analysis was incorrect in IPR2022-01291 and remains incorrect as applied to this Petition because Apple’s obviousness argument rests on *adding* a dark-colored coating to the existing light shielding frame 18 in Iwamiya. *See* Pet., 23 (“Sarantos explains that various masking techniques may be used to block stray light ... which when applied to Iwamiya’s light shielding frame 18 ... provides this

element.”). As explained above, a POSITA would have understood that Iwamiya’s existing light shielding frame 18 is already opaque, even if the precise details of that opaque material is left to the POSITA. EX2002, ¶69. And given that the light shielding frame 18 is already opaque, a POSITA would have no reason to then **further add** a dark-colored coating to the frame 18. *Id.* Doing so would have been needlessly redundant—indicating that a POSITA would not have been motivated to do so. *Id.*; see *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012) (where “each device independently operates effectively, a person having ordinary skill in the art, who was merely seeking to create a better device [], would have no reason to combine the features of both devices into a single device.”). Furthermore, an in-mold label, such as found in Sarantos, does not provide the structural material for the frame itself. EX2002, ¶69. Rather, it is, as its name states, a label applied to a structure. *Id.*

The IPR2022-01291 Final Written Decision also incorrectly concluded that “the fact that Sarantos’s dark-colored coating is disposed within a translucent or transparent material ... does not negate Apple’s motivation, because Iwamiya does not limit the material or structure to be used in light shielding frame 18....” EX2035, 40. But a POSITA would have understood that the light shielding frame **would not have been** translucent or transparent. EX2002, ¶70. A POSITA would have recognized no need to take Sarantos’ in-mold label and apply it to an opaque

structure like Iwamiya’s light shielding frame because the frame already blocks light. *Id.* Thus, without using the ’159 Patent’s claims as a guide, a POSITA would not have been motivated to further add an in-mold label from Sarantos to Iwamiya’s light shielding frame. *Id.*

Additionally, under Apple’s Delaware construction of “opening” to mean “empty space,” a POSITA would not have even looked to Sarantos for a dark-colored coating because Sarantos uses solid windows, not empty spaces. *See* EX1005, Fig. 22, 17:1-10; EX2002, ¶71.

A POSITA would have needed some reason to add a layer of dark-colored coating to Iwamiya’s light shielding, and presumably would have wanted to achieve some benefit from the addition. Apple failed to identify an actual benefit, despite listing several theories. EX2002, ¶72.

For example, Apple argues that a “coated light shielding frame has improved characteristics for shielding the photodiodes from stray light, thereby minimizing the amount of light that reaches the photodiodes 9 from LEDs 6 *without first being reflected off the user’s skin.*” Pet., 9. But that is *not* the purpose of the light shielding frame. EX2002, ¶73. Indeed, Apple argued that a different structure—the “reflection layers 13 and 15” that “prevent light emitted from light emitting unit 6 from reaching the photodiodes ... without first reaching the tissue of the user’s wrist”—serves that purpose. Pet., 25. And Apple, in the simultaneously filed

IPR2024-00241 Petition, specifically argued that this function of preventing light from reaching the photodetectors without first reaching the tissue cannot inform a POSITA's understanding of the light shielding frame because it is an entirely different function. In Apple's own words:

Indeed, the function of reflection layers is generally different from light shielding frame 18, which is specifically designed to shield light from reaching the photodiodes 9. APPLE-1004, 8:38-42. Iwamiya even refers to frame 18 and reflecting layers, e.g., reflection layers 13 and 15, by different terminology, thereby *underscoring differences in their respective functions*.

IPR2024-00241, Pet., 17. Thus, under Apple's own reasoning, a POSITA would not have been motivated to add a dark-colored coating to minimize the amount of light that reaches the photodiodes from the LEDs "without first being reflected off the user's skin" (Pet., 9) because that is not the function of the light shielding frame. EX2002, ¶73.

Apple also argues that a dark-colored coating would have been beneficial because it absorbs light, rather than reflecting it. *See* Pet., 9, 11–12. Specifically, Apple argues that using a dark-colored coating, as opposed to a reflective material, "would have reduced the amount of arrant [sic] light that could reflect back from the empty space through the optical filer [sic] 17 to the photodiodes" and that a "POSITA would have sought to reduce these effects since any light that reflected

back from the space surrounding frame 18 and through the optical filter 17 to the photodiodes would have different path lengths that could increase optical interference and reduce measurement accuracy.” Pet., 12. That is incorrect for multiple reasons. EX2002, ¶74.

First, Apple cited no competent evidence that pathlength variations caused by reflections within a sensor housing contributes to noise or would reduce measurement accuracy. EX2002, ¶75. Apple relies on excerpts from Webster (EX1009, 69, 96–97) in support, but Webster does not discuss reflections within a sensor housing causing pathlength variations as a potential source of error. Pet., 12; EX2002, ¶75. Rather, those cited sections of Webster discuss light scattering *in tissue* and errors caused by ambient light and emitted light that bypasses the tissue. EX1009, 69, 96–97; EX2002, ¶75. Even Apple acknowledges that is a different problem and is not the purpose of the light shielding frame to address. IPR2024-00241, Pet., 17; EX2002, ¶¶73, 75. Apple’s expert cites no evidence of reflections within a sensor housing causing pathlength variations as a source of error. EX1003, ¶¶36, 42. Rather, Anthony cited the same inapposite section of Webster and a portion of another reference, Schulz (EX1032), which also describes ambient light and emitted light bypassing tissue. EX2002, ¶75. Thus, no prior art of record describes using a dark-colored coating to reduce pathlength variations caused by light reflecting inside a sensor. *Id.*

Instead, Apple relied on the '159 Patent's own teachings to provide the motivation. EX2002, ¶76. The '159 Patent taught the use of a dark-colored coating to prevent pathlength variations that might occur when light reflects back and forth between the user's tissue and the sensor—because it is the pathlength of light as it scatters through the user's tissue that results in more light absorption. EX1001, 8:54-9:7; EX2002, ¶76. Apple apparently relied on this pathlength variation disclosure from the '159 Patent (which is improper hindsight). *See W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983) (“To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.”); EX2002, ¶76. But Apple misapplied that principle to light reflecting in the empty space inside a sensor housing. *Id.*

In fact, if pathlength variations from reflections inside of a sensor (not within tissue) were actually an issue, a POSITA would have ***disregarded Iwamiya entirely*** because Iwamiya's sensor design causes untold amounts of reflections within the light guide, as illustrated below. EX2002, ¶77.



Moreover, a POSITA would not have viewed reflections as an issue to be addressed when Iwamiya itself repeatedly emphasized that the light shielding function on an analogous structure in multiple other embodiments is to be performed using a reflective material. *See* EX1004, 18:61–65 (“holder portion 43 of the light receiving unit 33 is formed of a metal with a ***light shielding property***, such as

aluminum, and its surface is subject to alumite treatment to have a ***reflection function***”), 28:64–29:1 (same), 39:20–24 (same); EX2002, ¶78. Apple itself has recognized the light shielding frame 18 and holder portion 43 as analogous structures. *See* Pet., 10 (“[A] POSITA would have known that ***a light shielding frame 18 or holder portion 43*** as disclosed by Iwamiya can be of various proportions, materials, and that a thin surface could be coated.”); EX2002, ¶78.

Thus, as discussed above, a POSITA would not have been motivated to add a dark-colored coating to Iwamiya’s light shielding frame based on some supposed benefit. That leaves “design choice” as Apple’s remaining motivation to combine. Pet., 10. But Iwamiya does not leave the choice of an appropriate coating to the POSITA. EX2002, ¶79. Iwamiya does not disclose any coating on the light shielding frame 18 at all. *Id.*; EX1004, 8:38–47. As explained above, Apple seeks to ***add a layer of coating*** to the existing light shielding frame 18. *See* Pet., 23. Thus, a POSITA would not be faced with a “design choice” between which type of coating to use. EX2002, ¶79.

Apple’s argument boils down to the suggestion that the light shielding frame 18 ***could possibly*** be coated in a dark-color. EX2002, ¶80. But obviousness is not demonstrated merely by showing that a modification ***could*** be done. *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993–94 (Fed. Cir. 2017) (“[T]hat reasoning seems to say no more than that a skilled artisan, once presented with the two

references, would have understood that they *could be* combined. And that is not enough: it does not imply a motivation to pick out those two references and combine them....”) (original emphasis); EX2002, ¶80. In fact, the ITC previously rejected Apple’s similar argument that it would have been obvious to add a dark-colored coating to the back crystal of an Apple Watch which was already made of a black material. EX2050, 181–182; EX2043, 215–216.

Accordingly, Apple has not demonstrated the obviousness of Claims 1 and 19, not only because the proposed combination does not satisfy the claim limitation, but because there would have been no motivation to combine these references.

C. Apple Fails to Demonstrate Claim 14 and Its Dependent Claims Would Have Been Obvious

Apple addresses the remaining independent Claim 14 in Ground 1C. However, Apple fails to demonstrate that the proposed Iwamiya-Sarantos-Utter combination discloses or would have rendered obvious a “plurality of detectors are arranged in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site bounded by the circular shaped light block” as recited in Limitation [14.4].¹² Apple’s argument regarding this portion of Limitation [14.4] primarily cross-references its argument for Limitation [5.0]. *See*

¹² Apple does not rely upon Sarantos and Utter for this portion of Limitation [14.4].

Pet., 62 (citing Pet., § [5.0]). Here, Masimo focuses its response on Apple’s arguments in [5.0] (Pet., 29–35); *see also* EX2002, ¶81. In that section, Apple presents similar arguments regarding Iwamiya that it presented in IPR2022-01291. *See* Pet., 29–35. While the Board previously found in Apple’s favor in IPR2022-01291, respectfully, the Board’s finding was in error, as explained below. EX2035, 122–127.

Apple relies upon the embodiment in Iwamiya illustrated in Figures 1–4. *See* Pet., 29–33 (relying on disclosures and figures of Iwamiya’s first embodiment); EX1004, 4:5-16 (explaining Figures 1-4 illustrate the same embodiment); EX2002, ¶82. However, Iwamiya’s illustrations of that embodiment depict only a single photodetector 9, highlighted yellow below.

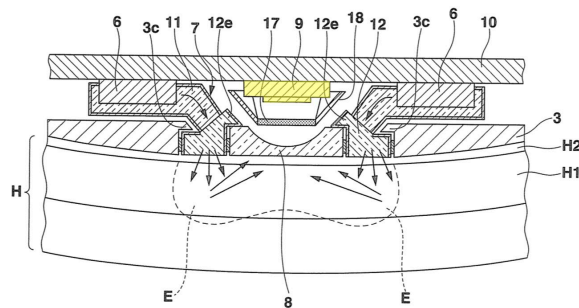


FIG.4

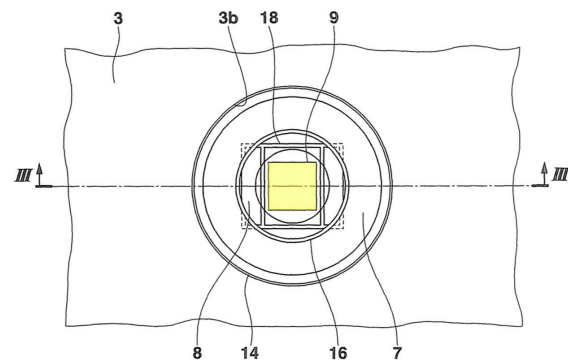


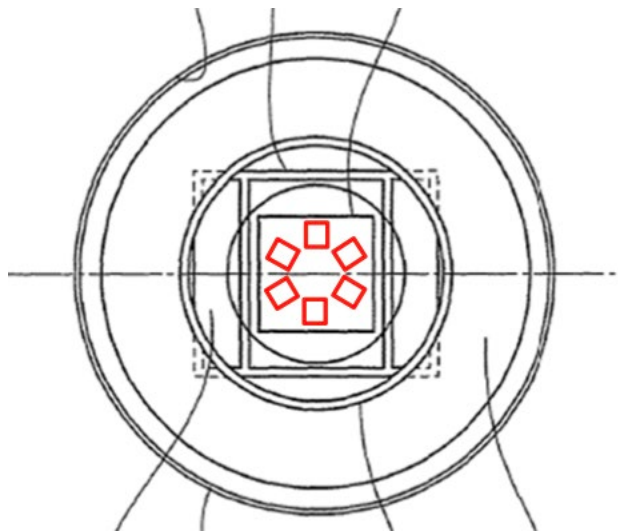
FIG.2

EX1004, Figs. 4, 2 (annotated); EX2002, ¶82.

Apple relies on Iwamiya’s vague description of an alternate embodiment where plural light receiving units 9 “may be two-dimensionally disposed in the

places positioned at the side opposite to the skin H in the scattered light taking unit 8” and “the plural light receiving units 9 are preferably disposed on the same circumference centered on an optical axis of the scattered light taking unit 8.” Pet., 31–32 (citing EX1004, 14:36–41). But Iwamiya does not illustrate how those photodetectors would be arranged, and critically, whether they would be “in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site bounded by the circular shaped light block” as claimed. EX2002, ¶83.

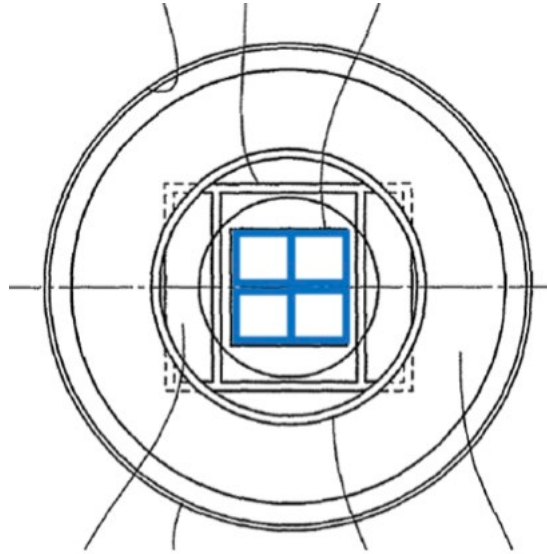
Instead, Apple and its expert imagine that a POSITA would have removed Iwamiya’s single photodetector and replaced it with “six or more” significantly smaller photodetectors in the following arrangement:



Pet., 33 (Apple’s annotation of EX1004, Fig. 2, cropped). Apple asserts that a POSITA would have been motivated to do so “to beneficially increase increase [sic]

detection area and light sensitivity.” Pet., 34. Those assertions about increased detection area and light sensitivity are not credible. EX2002, ¶¶84–85. Apple’s proposed arrangement reduces the overall detection area by more than 50%, and leaves a large empty spot in the center without photodetector coverage. EX2002, ¶85. Apple fails to explain how such a reduction in photodetector coverage would “increase detection area and light sensitivity.” Pet., 34; EX2002, ¶85. Indeed, the Board previously disregarded Apple’s arrangement. EX2035, 126 (“We do not rely on Dr. Anthony’s testimony concerning alleged benefits that might flow from using ‘*six or more*’ photodiodes in a circular array within Iwamiya’s device, including his illustrative annotations to Iwamiya’s Figure 2 in this regard.”).

As Masimo’s expert explains, a POSITA would not have interpreted Iwamiya to suggest such a photodetector arrangement, which presents severe drawbacks without providing a benefit. EX2002, ¶86. Rather, a POSITA would have understood Iwamiya’s reference to light receiving units being “disposed on the same circumference centered on an optical axis of the scattered light taking unit 8” to refer to the photodetectors’ relative location, not a circular array of detectors. EX2002, ¶87. A POSITA would have understood that Iwamiya described using a plurality of smaller photodetectors to cover the same area as the original larger photodetector 9, for example, by using smaller square photodetectors in place of the single larger photodetector, such as the configuration illustrated below.



EX1004, Fig. 2 (annotated, cropped); EX2002, ¶87.

The Board previously considered this argument, proffered by Masimo’s other expert, Dr. Duckworth, in IPR2022-01291, but stated, “it is not clear to us why Dr. Duckworth thinks his four photodiodes are ‘disposed on the same circumference’ as stated in Iwamiya, yet at the same time they are not in a circular-shaped array as required by claim 15 [of a related patent].” EX2035, 124. To be clear, the illustration above is not a circular-shaped array because it is clearly a **square**. EX2002, ¶88. It is a square like the original single photodetector 9 was a square. *Id.* The IPR2022-01291 Final Written Decision erred by dismissing Duckworth’s explanation, which provided the only reasonable interpretation of Iwamiya’s vague description, which does not satisfy the claim language. *Id.* A POSITA would not have interpreted Iwamiya’s description to suggest a circular array of photodetectors, regardless of the number of photodetectors, because such an

interpretation would significantly reduce photodetector coverage with no attendant benefit. *Id.*

The IPR2022-01291 Final Written Decision also erred by treating the claim limitation as reciting a numerical range. *See* EX2035, 124–126. But no such range is recited in the limitation. Masimo disclaimed arrangements of two or three photodetectors during prosecution because those arrangements *cannot* form the requisite circular shape. EX2057, 322; EX2002, ¶89. That did not convert a structural limitation into a numerical range. EX2002, ¶89.

The Board also erroneously concluded that “Iwamiya itself contemplates using *plural* photodiodes 9 disposed in a circular array having its center located at the optical axis of the scattered light taking unit 8.” EX2035, 126 (original emphasis). There is no such disclosure or suggestion in Iwamiya of a “circular array.” EX2002, ¶89. Iwamiya only vaguely describes photodiodes “disposed on the same circumference centered on an optical axis of the scattered light taking unit 8.” *Id.*; EX1004, 14:39–41. But as Dr. Madisetti explains, a POSITA would not have interpreted the vague description to suggest a circular array—and certainly not Apple’s circular array. EX2002, ¶89. Such an arrangement decreases the light detection area by creating a large empty spot at the center with no photodetector coverage. *Id.* That is contrary to Iwamiya’s teaching that the photodetector should be located “in the vicinity of the focal position on an optical axis of the scattered

light taking unit 8.” EX1004, 8:20–28; *see also* EX2035, 124 (Board relying on the quoted disclosure); EX2002, ¶89. Because the “focal position” is on the optical axis, a POSITA would not have interpreted Iwamiya to suggest focusing light received from the user’s tissue to a place without photodetector coverage. EX2002, ¶89. Such an interpretation is unreasonable. Without first referring to the ’159 Patent’s claim language, a POSITA would not have interpreted Iwamiya to disclose or suggest such an arrangement. *Id.*

Accordingly, Apple does not demonstrate the obviousness of Claim 14 and its dependent claims. *See* EX2002, ¶¶90–91.

VI. RESERVATION OF RIGHTS

Should the Board decide to institute an *inter partes* review, Masimo reserves all rights to make additional arguments in and present claim constructions and evidence with its Patent Owner Response. Masimo’s silence on any particular claim or limitation at this time is not a concession that the Petition’s discussion of that claim or limitation is properly based. Patent Owner also reserves the right to dispute the level of ordinary skill in the art if the Board decides to institute *inter partes* review. Accordingly, Masimo reserves the right to submit additional or alternative arguments of patentability, and nothing in this Preliminary Response acts or should be construed to act as an admission, acquiescence, or estoppel on the merits of the Petition.

VII. CONCLUSION

For the foregoing reasons, Masimo respectfully requests the Board deny institution.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 11, 2024

/ Brian C. Claassen /

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Attorney for Patent Owner

Masimo Corporation

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), Counsel for Patent Owner Masimo Corporation hereby certifies that this document complies with the type-volume limitation of 37 C.F.R. § 42.24(b). According to Microsoft Office Word 2010's word count, this document contains approximately 11,613 words, including any statement of material facts to be admitted or denied in support, and excluding the table of contents, table of authorities, mandatory notices under § 42.8, exhibit list, certificate of service or word count, or appendix of exhibits or claim listing.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 11, 2024

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Attorney for Patent Owner
Masimo Corporation

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to 37 C.F.R. § 42.6(e) and with the agreement of counsel for Petitioner, a true and correct copy of **PATENT OWNER PRELIMINARY RESPONSE AND EXHIBITS 2001-2043, 2050, 2056-2057, 2072, AND 2074** are being served electronically on April 11, 2024, to the e-mail addresses shown below:

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