

Filed on behalf of **Masimo Corporation**
By: Philip M. Nelson (Reg. No. 62,676)
Ted M. Cannon (Reg. No. 55,036)
Jarom D. Kesler (Reg. No. 57,046)
KNOBBE, MARTENS, OLSON & BEAR, LLP
2040 Main Street, Fourteenth Floor
Irvine, CA 92614
Tel.: (949) 760-0404
Fax: (949) 760-9502
Email: MasimoIPR-783@knobbe.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MASIMO CORPORATION,
Petitioner

v.

APPLE INC.,
Patent Owner

Case No. IPR2023-00634
Patent No. 10,627,783

**PETITIONER'S REPLY ON § 325(D) IN SUPPORT OF PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 10,627,783**

TABLE OF CONTENTS

Page No.

I.	INTRODUCTION	1
II.	LEGAL BACKGROUND.....	1
III.	ARGUMENT.....	1
A.	The Prior Art and Arguments in the File History and Petition Differ.....	1
1.	Masimo’s prior art is stronger than Apple’s selected references.	1
2.	No file history arguments are substantially the same as the petition’s arguments.	4
B.	The Deficiencies Described Above Also Constitute Error	7
IV.	CONCLUSION.....	7

TABLE OF AUTHORITIES

Page No(s).

<i>Advanced Bionics, LLC v. Med-El Electromedizinische Geräte GmbH,</i> IPR2019-01469, Paper 6 (Feb. 13, 2020)	1, 6, 7
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG,</i> IPR2017-01586, Paper 8 (Dec. 15, 2017)	1, 4, 7
<i>Hum Indust. Tech., Inc. v. Amsted Rail Co., Inc.,</i> IPR2023-00539, Paper 10 (July 26, 2023)	7
<i>Oticon Medical AB et al. v. Cochlear Ltd.</i> IPR2019-00975, Paper 15 (Oct. 16, 2019)	4, 7

OTHER AUTHORITIES

35 U.S.C. § 103	1, 5
35 U.S.C. § 325	1, 5

EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 10,627,783 ('783 Patent)
1002	File History of the '783 Patent
1003	Declaration of Professor R. James Duckworth, Ph.D.
1004	<i>Curriculum Vitae</i> of Professor R. James Duckworth, Ph.D.
1005	PCT Publication No. WO 2005/092182 A1 ("Kotanagi")
1006	U.S. Patent No. 6,265,789 ("Honda")
1007	U.S. Publication No. 2001/0056243 ("Ohsaki")
1008	PCT Publication No. WO 2012/140559 A1 ("Shmueli")
1009	European Patent App. No. EP14163114 ("Coppola")
1010	U.S. Provisional Patent App. No. 61/976,388 ("Fei")
1011	Reserved
1012	U.S. Publication No. 20150214749 A1 ("Park")
1013	Reserved
1014	U.S. Publication No. US 20120221254 A1 (Kateraas)
1015	U.S. Provisional Patent Application No. 61/932258 ("Park Provisional")
1016	U.S. Publication No. US 20140135594 ("Yuen")
1017	PCT Publication No. WO 2015116111 A1 ("Jabori")
1018–1019	Reserved
1020	PCT Patent Pub. WO 2015150199 A1 ("Coppola PCT")
1021	Reserved
1022	U.S. Patent No. 4,129,124 ("Thalmann")

Masimo v. Apple
IPR Petition – U.S. Patent No. 10,627,783

Exhibit No.	Description
1023–1024	Reserved
1025	U.S. Patent No. 4,163,447 (“Orr”)
1026	U.S. Patent No. 4,224,948 (“Cramer”)
1027	U.S. Patent No. 4,248,244 (“Charnitski”)
1028	PCT Publication No. WO 1982000088 A1 (“Steuer”)
1029	U.S. Patent No. 4,375,219 (“Schmid”)
1030	U.S. Patent No. 5,316,008 (“Suga”)
1031	U.S. Patent No. 5,738,104 (“Lo”)
1032	Reserved
1033	U.S. Publication No. 20050116820 A1 (“Goldreich”)
1034	U.S. Publication No. 20070276270 A1 (“Tran”)
1035	U.S. Publication No. 20080208009 A1 (“Shklarski”)
1036	U.S. Patent No. 6,091,530 (“Duckworth”)
1037	U.S. Patent 6,075,755 (“Zarchan”)
1038	Y. Mendelson, “A Wearable Reflectance Pulse Oximeter for Remote Physiological Monitoring,” Proceedings of the 28 th IEEE (2006)
1039	Y. Mendelson, “Wearable Wireless Pulse Oximetry for Physiological Monitoring,” PPL Workshop (2008)
1040	Reserved
1041	U.S. Publication No. 20150355604 A1 (“Fraser”)
1042	J. Shackelford and R. Doremus, “Ceramic and Glass Materials Structure, Properties and Processing” (2008) – Excerpt
1043	F. Shi, “Ceramic Materials – Progress In Modern Ceramics” (2012) – Excerpt
1044	R. Loehman, “Characterization of Ceramics” (1993) – Excerpt

Masimo v. Apple
IPR Petition – U.S. Patent No. 10,627,783

Exhibit No.	Description
1045	F. Aldinger and V. Weberruss, “Advanced Ceramics and Future Materials: An Introduction to Structures, Properties, Technologies, Methods” (2010) – Excerpt
1046	W.D. Kingery et al., “Introduction to Ceramics: Second Edition” (1960) – Excerpt
1047	USPTO Memo of April 5, 2018 regarding <i>Dynamic Drinkware</i> and <i>Amgen</i> cases
1048	District of Delaware Statistics, downloaded on February 21, 2023 from https://www.uscourts.gov/sites/default/files/data_tables/fcms_na_dist_profile0930.2022.pdf
1049	Declaration of Sylvia D. Hall-Ellis, Ph.D.
1050	Apple Inc. v. Masimo Corporation, et al., May 25, 2023 Scheduling Order, Case No. 1:22-cv-01378-MN (JLHx) (D. Del.)

I. INTRODUCTION

Apple used its entire POPR to request IPR dismissal under 35 U.S.C. § 325(d), but dismissal is not warranted. Nothing close to the petition’s art and arguments was considered by the examiner, causing material examination error.

II. LEGAL BACKGROUND

Institution may be denied because “the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (Dec. 15, 2017) provided six 325(d) factors (“BD Factors”). These are grouped into a two-part test in *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (Feb. 13, 2020).

III. ARGUMENT

A. The Prior Art and Arguments in the File History and Petition Differ

1. Masimo’s prior art is stronger than Apple’s selected references.

Apple extracts a few references from over 600 cited in the file history and compares them individually to the uncited references Masimo asserts in its §103 obviousness combinations. Apple concedes the uncited petition references are all new, but argues they are cumulative. The analysis below refutes this, showing the new references are materially stronger, so BD Factors (a) and (b) favor Masimo.

The petition relies on *Kotanagi* for many claimed features, noting that it

teaches charging in a “contactless state.” EX1005 ¶(0053); Pet. at 31. Apple argues that *Yuen*, from the file history is analogous to *Kotanagi*. POPR at 29. Apple juxtaposes figures from *Kotanagi* and *Yuen* (*id.*), but this just highlights how features such as rear biosensors are common in the prior art. Indeed, Apple admits that the file history narrowly limits claim scope to: “the specific arrangement and configuration of the claimed cover, opening in the housing, and wireless charging coil.” *Id.* at 2, 3, 11, 39; EX1002 at 387. In this context, *Kotanagi* is superior to *Yuen*, which lacks wireless charging disclosure. Apple points to *Shim* (from an IDS, EX1002 at 1549) as combining biosensing and wireless charging. POPR at 29. But *Shim*’s earliest priority (in Korea) is October 8, 2014, so it is not prior art when compared to the ’783 application’s earliest priority of September 2, 2014. Apple removed the Shim reference from its subsequent POPR in IPR2023-00734.

The petition then cites *Honda*, which, reciprocally, suggests combination with *Kotanagi*, teaching both wireless watch charging and pulse/heart rate sensing. EX1006, 6:17–19; *see* Pet. at 25–32. Apple argues *Mooring* (from an IDS, EX1002 at 1430) is substantially the same as *Honda* and points to a description of “[o]ther watches” in *Mooring*’s background section. POPR at 30–31. There, an induction coil “comes in contact with a charging plate on the watch stand.” EX2004, 1:38–53. Elsewhere, *Mooring* teaches recharging with ***physical contacts*** (510) for “both power and ground” terminals. EX2004, 8:12–15. In contrast,

Honda’s cover glass spans a bottom watch opening; within its housing and behind its cover glass, *Honda*’s “wireless charging receive coil” is “aligned with the opening,” as claimed. Pet. at 23–25. *Honda*’s Figure 15 shows inductive charging through glass is ten times more efficient than through a metal watch housing. EX1006 at 14; see Pet. at 34–35. Thus, *Honda* is far superior to *Mooring* to show the “specific arrangement and configuration of the claimed cover, opening in the housing, and wireless charging coil” (EX1002 at 387).

Apple points to *Mistry*, arguing it “can facilitate wireless charging and biometric sensing.” POPR at 32. For wireless charging, *Honda* is superior because *Mistry* only refers to putting a coil “in or on” the device body or band. EX2005 ¶¶[0127]–[0128]. Apple points to *Mensing* (POPR at 31), which teaches an in-vivo sensor powered “transcutaneously” via “inductive coupling” (EX2006, 26:14–15) and a battery “charged via an inductive and/or wireless charging pad,” (EX2006, 26:22–24). But Apple cites nothing in *Mensing* teaching where or how to place a coil. Thus, Apple points to nothing in *Mooring*, *Mistry*, and *Mensing* that is comparable or superior to *Honda*.

The petition also features *Kateraas* (Pet. at 60–61), which teaches a sapphire material covering biosensors on the rear surface of a watch. EX1014 ¶[0059]. Apple points to *Burton*’s sapphire cover as analogous (POPR at 34), but this cover was for *Burton*’s **watch face**, not a biosensor module. EX1002 at 1493. Thus,

Burton was applied to later-canceled claim 20 (a cover for the “top portion,” EX1002 at 2100). EX2007, 3:52–57. Apple also points to *Yuen*’s glass cover. POPR at 33–34. Authorities provided with the petition show glass is a subset of ceramics or “usually” considered a ceramic. EX1003 ¶¶45–49. These authorities were absent from the file history, which failed to consider *Yuen*’s glass cover a ceramic. Instituting would correct this error, as the petition explains how *Kateraas* (including its sapphire teachings), with other new art, renders the claims obvious.

The petition cites *Jabori* in Grounds 4 and 6 (pp. 91–93, 97–99, 105–107) and *Fraser* in Ground 5 (pp. 100–104). Apple’s POPR never asserts these are cumulative, so the POPR should fail for this reason alone. *See Oticon Medical AB et al. v. Cochlear Ltd.*, IPR2019-00975, Paper 15 (Oct. 16, 2019), p. 10.

Accordingly, Apple’s hand-picked file history references are materially different from those cited in the petition for “the specific arrangement and configuration of the claimed cover, opening in the housing, and wireless charging coil.” EX1002 at 387. BD Factors (a) and (b) thus strongly favor Masimo.

2. No file history arguments are substantially the same as the petition’s arguments.

Just as its prior art *references* were all new, Masimo’s *arguments* (how the petition relies on that art) do not “overlap” any arguments from examination.

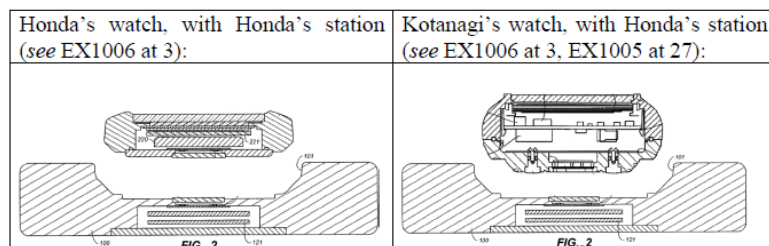
Thus, BD Factor (d) strongly favors Masimo. Apple does not point to any specific

combinations or motivations in the file history, only claiming to show the examiner “possess[ed]” individual references that themselves “contemplated” substantially the same functionality as Masimo’s references. POPR at 3.

Masimo’s petition presents §103 combinations, including motivations to combine (*e.g.*, Pet. at 24, 30, **31–33**, 35, 49–50, 55–56, **68–69**, 80, 88, **92–93**, **102–103**, **107**; *see* supporting citations to EX1003). One example:

Kotanagi teaches a pulse rate biosensor watch that may be charged in a “contactless state,” motivating a POSITA to look to Honda. EX1005 ¶(0053). Honda teaches wireless watch charging, but also refers to watch sensors for pulse/heart rate or heart rate of the body, motivating a POSITA to look to Kotanagi. EX1006 6:14–20; 8:40–42. EX1003 ¶130.

Pet. at 31. Apple was aware of Masimo’s extensive motivation analyses, spending nine pages (POPR at 42–51) addressing their substance. Importantly, however, Apple never argues that these motivations are cumulative to anything in the file history. Instead, Apple’s POPR only argues references individually, failing to assert any combinations that are collectively as strong as, for example, Kotanagi and Honda together. The petition (at 94) shows how well these references would nest for charging:



Apple has not shown how any set of file history references fits together so well.

In *Advanced Bionics*, the Board explains a policy of deferral: “At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Advanced Bionics* at 9. Apple shows no previous “evaluations” to which the Board can now defer.

Moreover, under *Advanced Bionics* (see footnote 9), 325(d) denials only pertain where the Office evaluated the art or arguments with respect to the “challenged claims.” Here, art was only applied to claims that were then canceled. When fresh claims were entered (and promptly issued), they had been transformed:

Example limitations found <i>only</i> in initial independent claims:	
1	“a curved side portion that extends from the bottom portion to the top portion”
12	“an edge protruding outwardly from the bottom portion of the housing”
17	“a mask positioned relative to an internal surface of the transparent cover”

EX1002 at 2097–2100. The examiner focused searching to address the above limitations, which appear nowhere in the *issued* claims. EX1002 at 1478–1493. Instead, issued claims 1, 9, and 15 include, for the first time, a “wireless charging receive coil” that is positioned or aligned in a specific way. Compare EX1002 at 2097–2100 to 1275–1278. Prompt allowance failed to develop the file history with citation of relevant art and arguments to which the Board could now defer.

B. The Deficiencies Described Above Also Constitute Error

Failure to evaluate the petition’s asserted references shows complete error, so BD Factors (c) and (e) favor Masimo. It is not *re*consideration warranted here, but consideration in the first instance. Thus, BD Factor (f) also favors Masimo. “Material error” can be omission of a reference. *Oticon* at 19; *Advanced Bionics* at 10 (omission can be error where file history not well developed). Even one new secondary reference can be sufficient to institute. *Oticon* at 10. Here, *all* the references are new, and Apple has not even argued cumulateness with respect to *Jabori* or *Fraser*. As noted above, it was error to fail to consider *Yuen*’s glass cover a ceramic. As in *Oticon*, the different structures and motivations to combine presented in the petition show the art and arguments are not cumulative, so examination was flawed. *Id.* at 15–16. Finally, even if references such as *Mooring* are deemed relevant, initialing a long IDS does not indicate the examiner “sufficiently evaluated or appreciated the relevance” of each reference for purposes of § 325(d). *Hum v. Amsted*, IPR2023-00539, Paper 10 (July 26, 2023), p. 51.

IV. CONCLUSION

Petitioner respectfully requests that the Board institute an IPR and cancel claims 1–20 of the ’783 patent.

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: August 7, 2023

/Philip M. Nelson/

Masimo v. Apple
IPR Petition – U.S. Patent No. 10,627,783

Philip M. Nelson (Reg. No. 62,676)
Ted M. Cannon (Reg. No. 55,036)
Jarom D. Kesler (Reg. No. 57,046)
Customer No. 64,735
Attorneys for Petitioner
Masimo Corporation
(949) 760-0404

CERTIFICATE OF PAGE LIMITATIONS

The undersigned certifies that foregoing **PETITIONER’S REPLY ON § 325(D) IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,627,783**, exclusive of the parts exempted as provided in 37 C.F.R. § 42.24(a), contains 7 pages and therefore complies with the page limit specified in the Board’s Order dated July 31, 2023.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: August 7, 2023

By: /Philip M. Nelson/
Philip M. Nelson (Reg. No. 62,676)
Customer No. 64,735
Attorneys for Petitioner
Masimo Corporation
(949) 760-0404

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to 37 C.F.R. § 42.6(e) and with the agreement of counsel for Patent Owner, a true and correct copy of **PETITIONER’S REPLY ON § 325(D) IN SUPPORT OF PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 10,627,783** is being served electronically on August 7, 2023, to the e-mail addresses shown below:

W. Karl Renner Fish & Richardson P.C. 60 South Sixth Street, Suite 3200 Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR50095-0144IP1@fr.com	Roberto J. Devoto Craig A. Deutsch Grace Kim Andrew Patrick Fish & Richardson P.C. 60 South Sixth Street, Suite 3200 Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR50095-0144IP1@fr.com
--	--

Dated: August 7, 2023

/Philip M. Nelson/
Philip M. Nelson (Reg. No. 62,676)
Customer No. 64,735
Attorneys for Petitioner
Masimo Corporation
(949) 760-0404