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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 IPR2024-00294
U.S. Patent 10,736,507

PATENT OWNER'S REVISED CONTINGENT MOTION TO AMEND

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OTHER AUTHORITIES

35 U.S.C. § 316	1
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EXHIBITS CITED

Exhibit No.	Description
2045	U.S. Patent App. No. 15/880,071
2046	U.S. Prov. Patent App. No. 61/703,729
2047	U.S. Patent App. No. 14/033,315

I. INTRODUCTION

Pursuant to 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121, Patent Owner Masimo Corporation (“Masimo”) submits this revised contingent motion to amend claims 13, 14, 17, and 19 of the ’507 Patent (“original corresponding claims”) as set forth in the appendix of substitute claims, which lists substitute claims 21–24 (“substitute claims”). In the event the Board finds at least one of the original corresponding claims unpatentable, Masimo respectfully requests that the Board grant this revised Motion to Amend RMTA with respect to the corresponding proposed substitute claim or claims. Accordingly, this RMTA is contingent upon a determination of unpatentability of the original corresponding claims. Petitioner Apple filed an Opposition to Patent Owner’s Motion to Amend (“Opposition”) (Paper 31) on January 13, 2025, and the Board issued Preliminary Guidance (“PG”) (Paper 33) on Masimo’s initial Contingent Motion to Amend (“MTA”) on January 29, 2025. This RMTA is responsive to the issues raised in the Board’s PG and/or the Opposition, and to the grounds of unpatentability asserted in the present IPR.

As shown below, this RMTA and the included substitute claims meet all requirements of 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121. *See Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129 Paper 15 at 4 and IPR2018-01130 Paper 14 at 4 (PTAB Feb. 25, 2019) (precedential). Specifically, this motion includes “new proposed substitute claims in place of the previously presented substitute claims,

where each new proposed substitute claim presents a new claim amendment.” The substitute claims are: (i) presented in a claim listing; (ii) reasonable in number; (iii) responsive to a ground of unpatentability involved in the trial; (iv) non-broadening; and (v) supported by the written description. *Id.* at 4–8. Moreover, Masimo hereby confirms and explains below its belief that the proposed substitute claims are patentable over all known prior art, whether alone or in combination, under the relevant standards of Title 35 of the United States Code.

Masimo respectfully submits that it is entitled to the revised contingent substitute claims unless Petitioner “prove[s] all propositions of unpatentability.” *Aqua Prods. v. Matal*, 872 F.3d 1290, 1310 (Fed. Cir. 2017) (*en banc*).

II. STATEMENT OF RELIEF REQUESTED

To the extent the Board finds any of original claims 13, 14, 17, or 19 unpatentable, Masimo respectfully requests that the Board grant this revised motion to amend by entering at least the proposed claim(s) presented herein in substitution for any of these original corresponding claims that are found unpatentable, or in the alternative, that the Board grant this motion to amend by entering each of the reasonable number of amended claims proposed herein.

III. THE SUBSTITUTE CLAIMS SATISFY 37 C.F.R. § 42.121(a)**A. The Substitute Claims Are Non-Broadening**

The attached appendix of substitute claims lists the proposed substitute claims and shows that each retains all features of the corresponding original claim. The amendments add non-broadening limitations. The proposed substitute claims thus do not enlarge the scope of the corresponding original claims in any way. The following table further indicates how each proposed substitute claim does not broaden the corresponding original claim.

Original Cl. No.	Substitute Cl. No.	Amendments (no substitute claims have broadening amendments)
13	21	• the signals output from the optical sensor are “analog” signals • the processing board is in data communication with a “smartphone” having a “touch-sensitive smartphone” display • the processing board receives “through a wired connection” one or more “analog” signals • the processing board processes the signals to generate the SpO2 measurement values “and heart rate” • the SpO2 measurement values “and heart rate” are “wirelessly” output to the “smartphone” mobile computing device • the application is configured to execute commands

Original Cl. No.	Substitute Cl. No.	Amendments (no substitute claims have broadening amendments)
		on the “smartphone” mobile computing device • the application generates the graphical user interface “on the touch-sensitive smartphone display” • the application displays SpO2 measurement values “at one or more times” • the application “at one or more times” displays “graph of a history of the SpO2 measurement values” • the application “at one or more times” displays “a graph of a history of the heart rate” • the application “at one or more times” displays “a graphical representation of a heart” • the plurality of user inputs are configured to allow the user to “use the touch-sensitive smartphone display” • the “computer-implemented method is configurable to authenticate user data access by using at least one of fingerprint, facial, and voice recognition technologies” • “the processing board” is “surrounded within a protective assembly comprising upper and lower shells and a rounded rectangular enclosure forming a cavity with upper and lower openings, the

Original Cl. No.	Substitute Cl. No.	Amendments (no substitute claims have broadening amendments)
		openings having an inner ledge and a perimeter lip sized and configured to receive the upper and lower shells to fill the openings such that the perimeter lip surrounds at least a portion of perimeter sides of the upper and lower shells” • “the light from the light source comprises at least red and infrared light” • “the SpO2 measurement system is configured to be portable by including the sensor and processing board together, wirelessly connectable to the smartphone mobile computing device for display of physiological data”
14	22	“the processing said one or more analog signals comprises applying an advanced signal processing algorithm with data filtering.”
17	23	“the sensor and processing board are provided together with a wrist-mounted device” and “the rounded rectangular enclosure comprising, on a first side, a first transition from the enclosure to a tapered flexible support member, and on a second side opposite the first side, a second transition from the enclosure to a tapered flexible support member.”
19	24	Avoids redundancy with independent claim 21 by removing “comprising wirelessly transmitting the

Original Cl. No.	Substitute Cl. No.	Amendments (no substitute claims have broadening amendments)
		SpO2 measurement values from the SpO2 measurement system to the mobile computing device.” Adds “the enclosure is configured to protect sensitive circuitry of the processing board from water damage.”

None of the above amendments are broadening because no updated claim “contains within its scope any conceivable apparatus or process which would not have infringed the original patent” or the original claim. *Sisvel Int’l S.A. v. Sierra Wireless, Inc.*, 81 F.4th 1231, 1240 (Fed. Cir. 2023) (citing *Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999)).

As noted above, substitute Claim 24 avoids redundancy with independent claim 21 by removing the limitation “comprising wirelessly transmitting the SpO2 measurement values from the SpO2 measurement system to the mobile computing device.” The Board has previously acknowledged that a “substitute dependent claim that deletes some limitations of its corresponding original dependent claim while still retaining all limitations of the original independent claim from which the original dependent depends, would not enlarge the scope of the claims.” *AliveCor, Inc. v. Apple Inc.*, IPR2023-00950, Paper 26 at 7 (PTAB July 11, 2024).

B. The Revised Substitute Claims Are Responsive To A Ground Of Unpatentability Involved In The Trial

The proposed revised substitute claims are also responsive to at least one ground of unpatentability in the trial. *See* 37 C.F.R. § 42.121(a)(2)(i). Petitioner has alleged that the original Claims 1–20 of the ’507 Patent—including independent Claims 1 and 13—are invalid under the following grounds.

GROUND LISTING

Ground	Claims	§102 Prior Art
1A1	13, 15, 18-19	Mendelson
Ground	Claims	§103 Prior Art
1A2	13, 15, 18-19	Mendelson
1B	16, 18, 20	Mendelson, Tran
1C	14, 17	Mendelson, Kianl
1D	1-2, 5, 7, 9, 12-15, 17-19	Mendelson, D’Angelo
1E	3	Mendelson, D’Angelo, Ording
1F	4-6, 8, 16, 18, 20	Mendelson, D’Angelo, Tran
1G	2, 7, 14, 17	Mendelson, D’Angelo, Kianl
1H	3	Mendelson, D’Angelo, Kianl, Ording
1I	10-11	Mendelson, D’Angelo, Goldsmith

Ground	Claims	§102 Prior Art
2A	13, 15, 18-19	Mendelson, Moon
2B	16, 18, 20	Mendelson, Moon, Tran
2C	14, 17	Mendelson, Moon, Kianl
2D	1-2, 5, 7, 9, 12-15, 17-19	Mendelson, Moon, D'Angelo
2E	3	Mendelson, Moon, D'Angelo, Ording
2F	4-6, 8, 16, 18, 20	Mendelson, Moon, D'Angelo, Tran
2G	2, 7, 14, 17	Mendelson, Moon, D'Angelo, Kianl
2H	3	Mendelson, Moon, D'Angelo, Kianl, Ording
2I	10-11	Mendelson, Moon, D'Angelo, Goldsmith

Pet. 1–2.

This Revised Motion to Amend proposes contingent amendments to certain claims that are responsive to at least one of these grounds, and/or to issues raised in the PG and/or Apple's Opposition. As a non-limiting example, in response to the arguments or grounds based on, e.g., Mendelson and/or Brady for Claim 13 and its dependents, Masimo's proposed substitute method Claim 21 states, *inter alia* that:

- the signals are “analog” signals;
- the processing board “wirelessly output[s] the SPO2 measurement values and heart rate to the smartphone”;
- the processing board receives “through a wired connection said one or more analog signals from the optical sensor”;

- the processing board is “in data communication with the optical sensor and a smartphone mobile computing device including a touch-sensitive smartphone display”;
- the “computer-implemented method is configurable to authenticate user data access by using at least one of fingerprint, facial, and voice recognition technologies”;
- “the processing board surrounded within a protective assembly comprising upper and lower shells and a rounded rectangular enclosure forming a cavity with upper and lower openings, the openings having an inner ledge and a perimeter lip sized and configured to receive the upper and lower shells to fill the openings such that the perimeter lip surrounds at least a portion of perimeter sides of the upper and lower shells”; and
- “the SpO2 measurement system is configured to be portable by including the sensor and processing board together, wirelessly connectable to the smartphone mobile computing device for display of physiological data.”

None of the asserted references, individually or in combination, disclose or render obvious the relevant combinations of limitations and features of the claims, which include the above limitations, taken as a whole. The additional words and phrases noted above recite additional distinguishing features, thereby addressing the grounds advanced in the Petition, the PG and Opposition, such that the asserted prior

art references fail to render obvious the proposed substitute claims that are presented herein.¹

Moreover, it is not necessary “that every word added to or removed from a claim in a motion to amend must be solely for the purpose of overcoming an instituted ground.” *Veeam Software Corp. v. Veritas Techs., LLC*, IPR2014-00090, Paper 48 at 28 (Jul. 17, 2017). Rather, the question is whether “the proposed claim as a whole is ‘responsive to a ground of unpatentability involved in the trial....’” *Id.*, 29. Beyond that threshold, a patent owner may add other amendments that “serve[] the public interest by ensuring issuance of valid and clear patents.” *Id.* To the extent the Board finds that any other proposed amendments in a given substitute claim are not directly responsive to a ground of unpatentability here, those amendments are appropriate in view of the legal principles above.

C. The Substitute Claims Are Reasonable In Number

The total number of original claims is twenty, and the total number of proposed substitute claims is four. Masimo has selected a subset of the original claims in the IPR petition for amendment. Masimo proposes only four substitute

¹ Masimo does not concede, and is not conceding, that the original claims of the ’507 Patent are rendered unpatentable by the prior art asserted in the Petition. Rather, the proposed amendments presented herein further amplify distinctions between the asserted references and the ’507 Patent.

claims for four original claims, fitting the “presumption ... that only one substitute claim would be needed to replace each challenged claim.” 37 C.F.R. § 42.121(a)(3).

Thus, the four substitute claims are reasonable in number.

IV. THE SUBSTITUTE CLAIMS SATISFY 37 C.F.R. § 42.121(b)

A. The Substitute Claims Are Presented In A Claim Listing

Consistent with 37 C.F.R. § 42.121(b), this motion is accompanied by an appendix listing the proposed substitute claims and showing the proposed amendments to the claims as compared to the corresponding original claims.

B. The Substitute Claims Are Supported By The Original And Earlier Filed Disclosures For Each Claim

Pursuant to 37 C.F.R. §§ 42.121(b)(1)–(b)(2), the table below demonstrates that each proposed substitute claim is supported by each earlier-filed disclosure for which the benefit of the filing date is sought. In particular, the ’507 Patent issued from U.S. Patent App. No. 15/880,071, which was filed on January 25, 2018 (EX2045). The ’507 Patent is a continuation of, and claims priority to, U.S. Patent App. No. 14/033,315 (EX2047, the “’315 application”), which was filed on September 20, 2013. The ’315 application (EX2047) claims priority to U.S. Provisional Patent App. No. 61/703,729 (EX2046), which was filed on September 20, 2012. The example written description support citations provided herein are not necessarily exhaustive and do not unduly limit the meaning of the corresponding limitations.

Written Description Support Examples for Amended Features			
Claim	<u>EX2045</u> Original Disclosure of '507 Patent	<u>EX2046</u> Provisional App. No. 61/703,729 (Filed Sept. 20, 2012)	<u>EX2047</u> Non-Provisional App. No. 14/033,315 (Filed Sept. 20, 2013)
21	[0003], [0006], [0008], [0023], [0025]–[0030], [0032]–[0034], [0036], [0038], [0045]–[0047], [0051], [0061]–[0062], [0065]; FIGS 1–4D	Pages 1–10, 12– 13; FIGS 1–3	[0003], [0006], [0008], [0023], [0025]–[0030], [0032]–[0034], [0036], [0038], [0045]–[0047], [0051], [0061]–[0062], [0065]; FIGS 1–4D
22	[0006], [0027], [0032], [0047], [0093], Abst., FIG 4A–C	Pages 2, 7, 10, 13, FIG 3	[0006], [0027], [0032], [0047], [0093], Abst., FIG 4A–C
23	[0006]–[0008], [0023], [0038], [0040], [0048], [0051], [0074]; FIGS 1A–3	Pages 2, 6–7, FIGS 1–3	[0006]–[0008], [0023], [0038], [0040], [0048], [0051], [0074]; FIGS 1A–3
24	[0038], [0043]; FIGS 1A–1C	Page 6; FIGS 1–2	[0038], [0043]; FIGS 1A–1C

V. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSITA”) at the time of the ’507 Patent would have been a person with a working knowledge of physiological monitoring technologies and/or optical sensors used in physiological monitoring technologies. The person would have had a Bachelor of Science degree in an academic discipline emphasizing the design of electrical, computer, software, or optical technologies, in combination with training or at least one to two years of related work experience with capture and processing of data or information, or designing and using optical sensors or systems, including but not limited to physiological monitoring

technologies. Alternatively, the person could have had a Master of Science degree in a relevant academic discipline with less than a year of related work experience in the same discipline.

VI. CLAIM CONSTRUCTION

For purposes of this Contingent Motion, Masimo does not propose any specific claim constructions as it is not Masimo's burden to demonstrate patentability of the proposed substitute claims over the prior art. Masimo believes that the words use in the amendments provided herein, under their plain and ordinary meanings, establish patentability of the proposed substitute claims. However, Masimo reserves the right to propose claim constructions as needed to respond to any allegations of unpatentability presented by Petitioner.

VII. PATENTABILITY OVER THE PRIOR ART

In light of the Federal Circuit's *en banc* decision in *Aqua Products* (872 F.3d 1290, 1296, 1310 (Fed. Cir. 2017)), Masimo need not prove the patentability of the proposed substitute claims. Furthermore, the Federal Circuit has held that a patent owner satisfies its duty of candor by simply confirming—as Masimo does here—its belief that the proposed substitute claims are patentable over all known prior art, alone or combined. *Nike Inc. v. Adidas AG*, 812 F.3d 1326, 1350 (Fed. Cir. 2016) (overruled *en banc* on other grounds).

VIII. CONCLUSION

For the foregoing reasons, Masimo requests that, to the extent any corresponding original claim is deemed unpatentable, the Board enter and grant the corresponding proposed substitute claim(s).

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: February 20, 2025

/Jarom D. Kesler /

Jarom D. Kesler (Reg. No. 57,046)

Customer No. 64,735

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'S REVISED CONTINGENT MOTION TO AMEND** is being served electronically on February 20, 2025, to the e-mail addresses shown below:

W. Karl Renner, Reg. No. 41,265 Fish & Richardson P.C. 60 South Sixth Street Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR50095-0135IP2@fr.com	Patrick J. Bisenius, Reg. No. 63,893 Andrew B. Patrick, Reg. No. 63,471 Grace J. Kim, Reg. No. 71,977 Fish & Richardson P.C. 60 South Sixth Street Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR50095-0135IP2@fr.com
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Dated: February 20, 2025

/Jarom D. Kesler/

Jarom D. Kesler (Reg. No. 57,046)

Attorney for Patent Owner
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APPENDIX OF SUBSTITUTE CLAIMS

In the claim listing below, **underlining** and strikethrough (~~strikethrough~~) are used to show modifications to the corresponding original claims that are noted in parentheses.

21. (Substitute for claim 13, if that claim is found unpatentable). A computer-implemented method of informing a user of mobile measurement of oxygen saturation (“SpO2”), the computer-implemented method comprising:

outputting, from an optical sensor of an SpO2 measurement system, one or more analog signals responsive to light from a light source attenuated by tissue of the user at a measurement site, said one or more analog signals responsive to an oxygen saturation of said tissue; and

via a processing board of the SpO2 measurement system, the processing board in data communication with the optical sensor and a smartphone mobile computing device including a touch-sensitive smartphone display:

receiving through a wired connection said one or more analog signals from the optical sensor;

processing said one or more analog signals to generate the SpO2 measurement values and heart rate; and

wirelessly outputting the SPO2 measurement values and heart rate to the smartphone mobile computing device; and
via an application configured to execute commands on the smartphone mobile computing device:

generating a graphical user interface having a plurality of display portions on the touch-sensitive smartphone display;

displaying, in at least one portion of the plurality of display portions at one or more times, a representation of a physiological parameter of a plurality of physiological parameters comprising the SpO2 measurement values;

displaying, in at least one portion of the plurality of display portions at one or more times, a graph of a history of the SpO2 measurement values;

displaying, in at least one portion of the plurality of display portions at one or more times, a graph of a history of the heart rate;

displaying, in at least one portion of the plurality of display portions at one or more times, a graphical representation of a heart; and

displaying, in a different portion of the plurality of portions, a plurality of user inputs configured to allow the user to use the touch-sensitive smartphone display to interact with at least one of the plurality of display portions or the application;

wherein the computer-implemented method is configurable to authenticate user data access by using at least one of fingerprint, facial, and voice recognition technologies;

the processing board surrounded within a protective assembly comprising upper and lower shells and a rounded rectangular enclosure forming a cavity with upper and lower openings, the openings having an inner ledge and a perimeter lip sized and configured to receive the upper and lower shells to fill the openings such that the perimeter lip surrounds at least a portion of perimeter sides of the upper and lower shells;

the light from the light source comprises at least red and infrared light; and
the SpO₂ measurement system is configured to be portable by including the sensor and processing board together, wirelessly connectable to the smartphone mobile computing device for display of physiological data.

22. (Substitute for claim 14, if that claim is found unpatentable). The mobile pulse oximetry system of claim [[13]]21, further comprising, via the application:

perform a trend analysis on received SpO₂ measurement values; and
display results of the trend analysis in at least one portion of the plurality of display portions;

wherein the processing said one or more analog signals comprises applying an advanced signal processing algorithm with data filtering.

23. (Substitute for claim 17, if that claim is found unpatentable). The computer-implemented method of claim [[13]]21, further comprising, via the application, updating the representation of the physiological parameter to comprise one or more of a plurality of graphical representations of the SpO2 measurement values, the plurality of graphical representations comprising at least one of bar graphs or charts;

the rounded rectangular enclosure comprising, on a first side, a first transition from the enclosure to a tapered flexible support member, and on a second side opposite the first side, a second transition from the enclosure to a tapered flexible support member;

wherein the sensor and processing board are provided together with a wrist-mounted device.

24. (Substitute for claim 19, if that claim is found unpatentable). The computer-implemented method of claim [[13]]21, wherein the protective assembly is configured to protect sensitive circuitry of the processing board from water

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~~damage further comprising wirelessly transmitting the SpO2 measurement values from the SpO2 measurement system to the mobile computing device.~~