

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MASIMO CORPORATION,
Patent Owner.

IPR2022-01300
(Patent 7,761,127 B2)

Before JOSIAH C. COCKS, JAMES A. TARTAL, and ROBERT A.
POLLOCK, *Administrative Patent Judges*.

POLLOCK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner, Apple Inc., filed a Petition for *inter partes* review of claims 1–30 of U.S. Patent No. 7,761,127 B2 (Ex. 1001, “the ’127 Patent”). Paper 2 (“Pet.”). Patent Owner, Masimo Corporation, timely filed a (corrected) Preliminary Response to the Petition. Paper 12 (“Prelim. Resp.”).

Petitioner concurrently filed another petition for *inter partes* review of claims 1–30 of the ’127 patent on other grounds not asserted in this Petition. *Apple, Inc. v. Masimo Corporation*, IPR2022-01299, Paper 2 (PTAB July 22, 2022) (“the ’1299 Petition”). As set forth in the Decision on Institution in IPR2022-01299, we instituted an *inter partes* review of all challenged claims in that proceeding. *See* IPR2022-01299, Paper 21.

For the reasons provided below and based on the circumstances present here, we exercise discretion under 35 U.S.C. § 314(a) and deny institution of an *inter partes* review based on the present Petition.

A. Real Parties-in-Interest

Petitioner identifies itself, Apple Inc. as the real party-in-interest. Pet. 75. Patent Owner identifies itself as the real party-in-interest. Paper 5, 1.

B. Related Matters

In addition to the current matter, Petitioner challenges claims 1–30 of the ’127 patent in IPR2022-01299.

According to the parties, the ’127 patent is among the patents at issue *In the Matter of Certain Light-Based Physiological Measurement Devices and Components Thereof*, Inv. No. 337-TA-1276, pending before the U.S. International Trade Commission. Pet. 75; Paper 5, 1.

C. The ’127 Patent and Relevant Background

The ’127 patent, titled “Multiple Wavelength Sensor Substrate,” is directed to sensors comprising optical emitters (e.g., LEDs) and

corresponding detectors to non-invasively measure physiological parameters in a subject's blood. Ex. 1001, code (54), 2:14–28, 2:49–65. These components are commonly used in pulse oximeters, which measure oxygen saturation and pulse rate. *Id.* at 2:14–16.

In general, the sensor has light emitting diodes (LEDs) that transmit optical radiation of red and infrared wavelengths into a tissue site and a detector that responds to the intensity of the optical radiation after absorption (e.g., by transmission or transreflectance) by pulsatile arterial blood flowing within the tissue site.

Id. at 2:16–21. According to the Specification,

[o]ne aspect of a physiological sensor is emitters configured to transmit optical radiation having multiple wavelengths in response to corresponding drive currents. A thermal mass is disposed proximate the emitters so as to stabilize a bulk temperature for the emitters. A temperature sensor is thermally coupled to the thermal mass. The temperature sensor provides a temperature sensor output responsive to the bulk temperature so that the wavelengths are determinable as a function of the drive currents and the bulk temperature.

Id. 2:57–65; Abstract.

Figure 6 of the '127 patent is reproduced below.

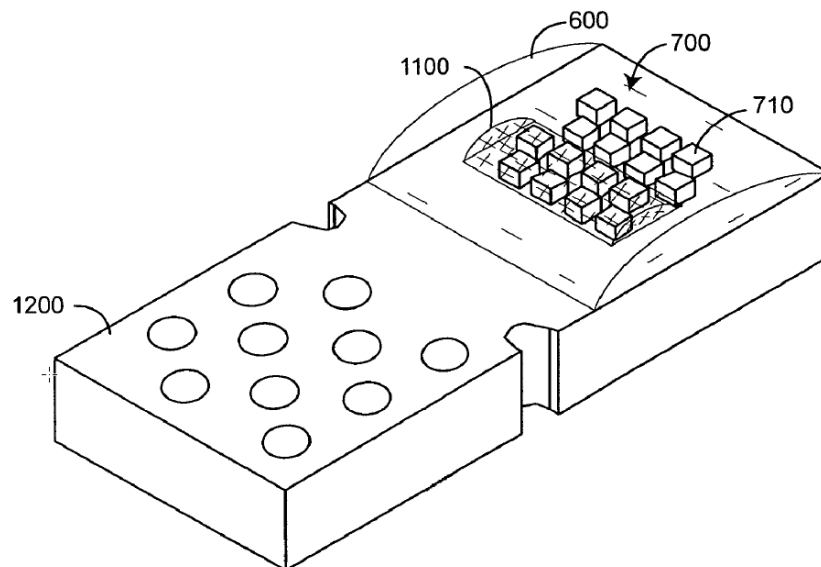


Figure 6 shows an exemplary emitter assembly comprising LEDs 710 arranged in emitter array 700 on a substrate 1200. *Id.* at 3:43–44, 6:48–52. The LEDs of emitter array 700 “are physically arranged and electrically connected in an electrical grid to facilitate drive control, equalization, and minimization of optical pathlength differences at particular wavelengths.” *Id.* at 6:54–58. “[S]ubstrate 1200 is configured to provide a bulk temperature of the emitter array 700 so as to better determine LED operating wavelengths.” *Id.* at 6:60–63. In some embodiments, “substrate 1200 is also configured with a relatively significant thermal mass, which stabilizes and normalizes the bulk temperature so that the thermistor measurement of bulk temperature is meaningful.” *Id.* at 10:67–11:4.

Figure 12 of the '127 patent is reproduced below.

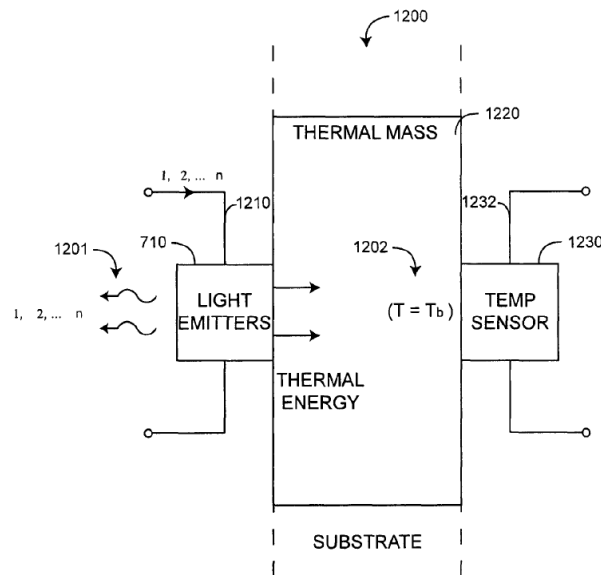


FIG. 12

Figure 12 shows a generalized block diagram of an emitter substrate. *Id.* 3:52. According to the '127 patent, Figure 12

illustrates light emitters 710 configured to transmit optical radiation 1201 having multiple wavelengths in response to corresponding drive currents 1210. A thermal mass 1220 is

disposed proximate the emitters 710 so as to stabilize a bulk temperature 1202 for the emitters. A temperature sensor 1230 is thermally coupled to the thermal mass 1220, wherein the temperature sensor 1230 provides a temperature sensor output 1232 responsive to the bulk temperature 1202 so that the wavelengths are determinable as a function of the drive currents 1210 and the bulk temperature 1202.

Id. at 10:22–31.

The Specification describes two embodiments involving the use of temperature measurements to determine the operating wavelength of emitters. *Id.* at 10:32–48. One embodiment involves the measurement of temperature of each individual emitter. *Id.* at 10:39–48. The other embodiment involves the determination of bulk temperature of the substrate to which the emitters are thermally coupled. *Id.* at 10:32–39. With respect to this embodiment, the Specification provides an equation (“EQ.4” or “Equation 4”) for determining the operating wavelength of each light emitter based on bulk temperature and drive current as determined by the sensor controller. *Id.*

D. Challenged Claims

Petitioner challenges claims 1–30 of the ’127 Patent. Pet. 2. The challenged claims variously depend from independent claims 1, 7, 13, 20, and 26. *See, e.g., id.* at iv–vii (claim listing). Claims 1 and 7, reproduced below, are illustrative of the subject matter challenged (paragraphing and labeling as added in Petitioner’s claim listing).

[1.P] A physiological sensor comprising:

[1.1] a plurality of emitters configured to transmit optical radiation having a plurality of wavelengths in response to a corresponding plurality of drive currents, the plurality of emitters including a substrate;

[1.2] a thermal mass disposed proximate the emitters and within the substrate so as to stabilize a bulk temperature for the emitters; and

[1.3] a temperature sensor thermally coupled to the thermal mass,

[1.4] wherein the temperature sensor provides a temperature sensor output responsive to the bulk temperature so that the wavelengths are determinable as a function of the drive currents and the bulk temperature.

Ex. 1001, 19:4–17; *see* Pet. iv

[7.P] A physiological sensor capable of emitting light into tissue and producing an output signal usable to determine one or more physiological parameters of a patient, the physiological sensor comprising:

[7.1] a thermal mass;

[7.2] a plurality of light emitting sources, including a substrate of the plurality of light emitting sources, thermally coupled to the thermal mass, the sources having a corresponding plurality of operating wavelengths, the thermal mass disposed within the substrate;

[7.3] a temperature sensor thermally coupled to the thermal mass and capable of determining a bulk temperature for the thermal mass, the operating wavelengths dependent on the bulk temperature; and

[7.4] a detector capable of detecting light emitted by the light emitting sources after tissue attenuation, wherein the detector is capable of outputting a signal usable to determine one or more physiological parameters of a patient based upon the operating wavelengths.

Ex. 1001, 19:35–54; *see* Pet. iv–v.

E. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–30 of the '127 Patent on the following grounds (Pet. 2):

Ground	Claims Challenged	35 U.S.C §	Reference(s)/Basis
3A	7–10	103	Dietiker, ¹ Oldham ²
3B	11–12	103	Dietiker, Oldham, Leibowitz ³
3C	1–3, 6, 13–17, 20– 23	103	Dietiker, Oldham Noguchi ⁴
3D	4, 5, 18–19, 24–25	103	Dietiker, Oldham Leibowitz, Noguchi
3E	26, 27, 30	103	Dietiker, Oldham Leibowitz, Yamada ⁵
3F	28, 29	103	Dietiker, Oldham, Leibowitz, Noguchi, Yamada

Petitioner further relies, *inter alia*, on the Declaration of Brian W. Anthony, Ph.D. (Ex. 1003). Patent Owner relies on the testimony of Jack Goldberg (Ex. 2051), and named inventor, Mohamed Diab (Ex. 2002).

II. ANALYSIS

Institution of *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a); *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (explaining that section “314(a) invests the Director with discretion on the question *whether* to institute review”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). Thus, there is no requirement that we must institute *inter partes* review based on any given petition, including the present Petition.

¹ Dietiker, U.S. 2003/0033102 A1, pub. Feb. 13, 2003. (Ex. 1009).

² Oldham et al., U.S. 2005/0279949 A1, pub. Dec. 22, 2005. (Ex. 1010).

³ Leibowitz, U.S. 4,591,659, issued May 27, 1986. (Ex. 1006).

⁴ Noguchi, U.S. 5,334,916, issued Aug. 2, 1994. (Ex. 1008).

⁵ Yamada, Certified English Translation of Japanese Patent Publication No. JP 2004-337605 A, pub. Dec. 2, 2004. (Ex. 1004).

The present Petition and the '1299 Petition were both filed on July 22, 2022. Both Petitions challenge claims 1–30 of the '127 patent. The PTAB Consolidated Trial Practice Guide (Nov. 2019) (“Consolidated Guide”)⁶ conveys that generally “one petition should be sufficient to challenge the claims of a patent in most situations” and that “multiple petitions by a petitioner are not necessary in the vast majority of cases.” Consolidated Guide 59. According to the Consolidated Guide, “[t]wo or more petitions filed against the same patent at or about the same time (e.g., before the first preliminary response by the patent owner) may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and efficiency concerns.” *Id.* (citing 35 U.S.C. § 316(b)). The Consolidated Guide also sets forth the following guidance:

To aid the Board in determining whether more than one petition is necessary, if a petitioner files two or more petitions challenging the same patent, then the petitioner should, in its petitions or in a separate paper filed with the petitions, identify: (1) a ranking of the petitions in the order in which it wishes the Board to consider the merits, if the Board uses its discretion to institute any of the petitions, and (2) a succinct explanation of the differences between the petitions, why the issues addressed by the differences are material, and why the Board should exercise its discretion to institute additional petitions if it identifies one petition that satisfies petitioner’s burden under 35 U.S.C. § 314(a).

Id. at 59–60.

Petitioner filed a separate “Notice Ranking and Explaining Material Differences Between Petitions for *Inter Partes* Review of U.S. Patent No. 7,761,127” (Paper 3, “Notice”), to which Patent Owner filed a response (Paper 10, “Response”).

⁶ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>

As a part of its Notice, Petitioner requests that the Board consider the '1299 Petition before the present Petition. Notice 2. Petitioner argues that both Petitions are warranted “[d]ue to word count constraints.” *Id.* at 5. In support of its position, Petitioner argues that the asserted grounds “are non-redundant at least in their reliance on different combinations of references that demonstrate the obviousness of the Challenged Claims in materially different ways.” *Id.* at 2⁷. Petitioner contends, for example, that whereas the present Petition relies on Dietiker as its “primary reference,” the '1299 Petition relies on Yamada. Notice, 2–3. To the extent this is true, we note that the present Petition *also* relies on Yamada, as well as the Leibowitz and Noguchi references asserted in the '1299 Petition, thus, indicating a substantial degree of overlap between the two petitions.

Moreover, in the Notice’s sole statement attempting to distinguish between the two “primary” references, Yamada and Dietiker, Petitioner asserts that “the Dietiker combinations describe active temperature regulation for LEDs in an oximetry instrument.” *Id.* at 3 (citing Ex. 1010 ¶¶ 24–25). At the high level of generality offered in the Notice, we see little difference between this description of Dietiker, and the '1299 Petition’s description of Noguchi as “controlling the emission spectrum of an LED with high precision,” by “enabl[ing] the device to compensate for temperature-induced shifts in the wavelengths of light emitted by an LED.” *See* '1299 Petition, 50–53. We further note that despite Petitioner’s designation of Dietiker as a primary reference, each ground in the present

⁷ Petitioner further asserts that the motivations to combine references in the two Petitions “materially differ,” yet it provides no details as to how. *Id.* at 2.

Petition relies on Dietiker in combination with Oldham. Pet. 2. And Oldham, like Noguchi asserted in the '1299 Petition, discloses a method for mitigating temperature-induced spectral shifts in LEDs. *See id.* at 9–11.

Petitioner also appears to suggest that two Petitions challenging the same claims of the '127 patent are warranted in light of the “larger litigation campaign against [it]” involving “hundreds of claims across twenty-two patents in district court and ITC proceedings.” Notice 3–4. But Petitioner does not address why proceedings involving the claims of other patents warrant two Petition’s challenging the same claims of the '127 patent.

Petitioner further argues that, whereas, only one claim of the '127 patent is at issue before the ITC, “it is entirely conceivable that [Patent Owner] will extend its campaign” and assert additional claims of the '127 patent against it “in a future district court action.” *Id.* at 4–5. We do not find this argument availing. The '1299 Petition presents twelve grounds addressing all 30 claims of the '127 patent, where each claim is challenged on two distinct grounds involving at least Yamada, and Yamada in combination with Chadwick. *See* IPR2022-01299, Paper, 2. The manifest adequacy of a single petition in advancing multiple grounds of unpatentability for each and every challenged claim does not favor a conclusion that a single petition is insufficient, or that multiple petitions are justified.

III. Conclusion

We have reviewed the present Petition and the '1299 Petition and determine that, on the record present here, Petitioner has not set forth adequate reasoning that justifies the institution of multiple *inter partes* reviews based on two petitions both directed to claims 1–30 of the '127

patent. *See generally*, Notice. Accordingly, in light of our determination to institute *inter partes* review on all grounds presented in the '1299 Petition (*see* IPR2022-01299, Paper 21), we exercise discretion under 35 U.S.C. § 314(a) to deny institution of the present Petition.

IV. Order

In consideration of the foregoing, it is

ORDERED that Petitioner's request for an *inter partes* review of claims 1–30 of the '127 patent under the present Petition is *denied* and no trial is instituted.

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