

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

MASIMO CORPORATION,  
Patent Owner.

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IPR2020-01524  
Patent 10,433,776 B2

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Before JOSIAH C. COCKS, ROBERT L. KINDER, and  
AMANDA F. WIEKER, *Administrative Patent Judges*.

KINDER, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
*35 U.S.C. § 314, 37 C.F.R. § 42.4*

## I. INTRODUCTION

### A. *Background*

Apple Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–16 (“challenged claims”) of U.S. Patent No. 10,433,776 B2 (Ex. 1001, “the ’776 patent”). Paper 2 (“Pet.”). Masimo Corporation (“Patent Owner”) waived filing a Preliminary response. Paper 6 (“PO Waiver”).

We have authority to determine whether to institute an *inter partes* review, under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314 (2018); *see also* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”).

For the reasons provided below and based on the record before us, we determine that Petitioner has demonstrated a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one of the challenged claims. Accordingly, we institute an *inter partes* review on all grounds set forth in the Petition.

### B. *Related Matters*

The parties identify the following matters related to the ’776 patent: *Masimo Corporation v. Apple Inc.*, Civil Action No. 8:20-cv-00048 (C.D. Cal.) (filed Jan. 9, 2020) (“the parallel district court litigation”);

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*Apple Inc. v. Masimo Corporation*, IPR2020-01520 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,258,265 B1);  
*Apple Inc. v. Masimo Corporation*, IPR2020-01521 (PTAB Sept. 2, 2020) (challenging claims of U.S. Patent No. 10,292,628 B1);  
*Apple Inc. v. Masimo Corporation*, IPR2020-01523 (PTAB Sept. 9, 2020) (challenging claims of U.S. Patent No. 8,457,703 B2);  
*Apple Inc. v. Masimo Corporation*, IPR2020-01526 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 6,771,994 B2);  
*Apple Inc. v. Masimo Corporation*, IPR2020-01536 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,588,553);  
*Apple Inc. v. Masimo Corporation*, IPR2020-01537 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,588,553);  
*Apple Inc. v. Masimo Corporation*, IPR2020-01538 (PTAB Sept. 2, 2020) (challenging claims of U.S. Patent No. 10,588,554 B2); and  
*Apple Inc. v. Masimo Corporation*, IPR2020-01539 (PTAB Sept. 2, 2020) (challenging claims of U.S. Patent No. 10,588,554 B2).  
Pet. 68; Paper 3, 2–3.

The parties further identify certain pending patent applications, as well as other issued applications, that claim priority to, or share a priority claim with, the '776 patent. Pet. 68; Paper 3, 1.

### C. *The '776 Patent*

The '776 patent is titled “Low Power Pulse Oximeter,” and issued on October 8, 2019, from U.S. Patent Application No. 16/174,144, filed October 29, 2018. Ex. 1001, codes (21), (22), (45), (54). The '776 patent

claims priority through a series of continuation applications to Provisional Application No. 60/302,564, filed July 2, 2001.<sup>1</sup> *Id.* at codes (60), (63).

The '776 patent relates to a pulse oximeter that may reduce power consumption in the absence of certain parameters that may be monitored to trigger or override the reduced power consumption state. *Id.* at code (57). “In this manner, a pulse oximeter can lower power consumption without sacrificing performance during, for example, high noise conditions or oxygen desaturations.” *Id.*

As depicted below, the low power pulse oximeter has signal processor (340) that derives physiological measurements (342), including oxygen saturation, pulse rate, and plethysmograph, from input sensor signal (322). Ex.1001, 4:65–5:16, Figs. 3, 4.

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<sup>1</sup> The Office has made the prior determination that the application leading to the '776 patent should be “examined under the pre-AIA first to invent provisions.” *See* Ex. 1002, 59 (Office Action of Jan. 17, 2019). We determine that based on this prior determination, and the lack of any contrary evidence before us, the Petition was not required to be filed more than nine months after the date of the grant of the patent. *See* 37 C.F.R. § 42.102(a)(1). Instead, based on the record before us, 37 C.F.R. § 42.102(a)(2) should apply, which allows a petition to be filed after “the date of the grant of the patent.”

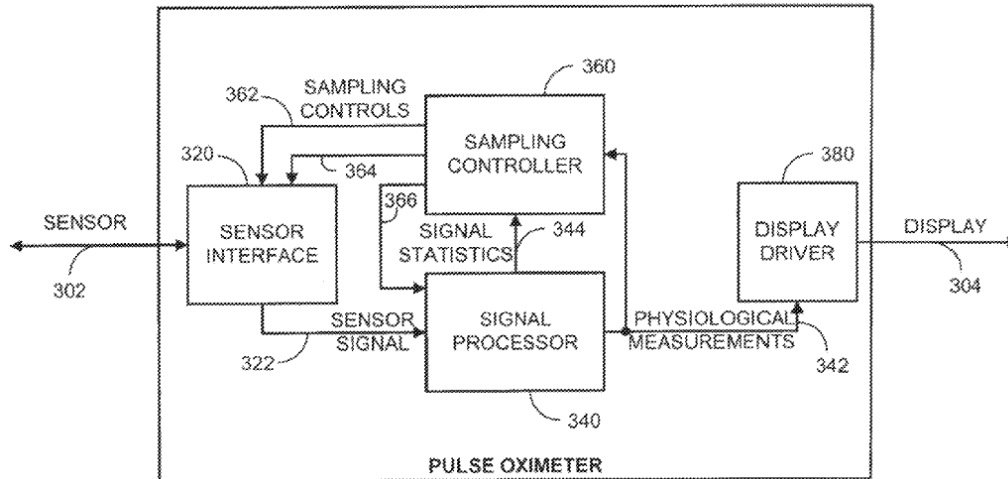


FIG. 3

Figure 3 illustrates a top-level block diagram of a low power pulse oximeter. *Id.* at 4:41–42. Signal processor (340) may also derive signal statistics (344), such as signal strength, noise, and motion artifact. *Id.* at 5:16–17, Figs. 3, 4. Physiological measurements (342) and signal statistics (344) may be input into sampling controller (360), which outputs sampling controls (362) that in turn are used to regulate pulse oximeter power dissipation by causing sensor interface (320) to vary the sampling characteristics of sensor port (302) and by causing signal processor (340) to vary its sample processing characteristics. *Id.* at 5:17–26, Figs. 3, 4. According to the '776 patent, power dissipation “is responsive not only to output parameters, such as the physiological measurements 342, but also to internal parameters, such as the signal statistics 344.” *Id.* at 5:26–29.

The pulse oximeter uses the physiological measurements and signal statistics to determine “the occurrence of an event or low signal quality condition.” Ex. 1001, 6:28–31. An event determination is based upon the physiological measurements and “may be any physiological-related

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