

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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IPR2020-01538  
Patent 10,588,554 B2

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Before GEORGE R. HOSKINS, ROBERT L. KINDER, and  
AMANDA F. WIEKER, *Administrative Patent Judges*.

WIEKER, *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 1–7 and 20–28 (“challenged claims”) of U.S. Patent No. 10,588,554 B2 (Ex. 1001, “the ’554 patent”). Paper 3 (“Pet.”). Masimo Corporation (“Patent Owner”) waived filing a Preliminary response. Paper 7 (“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 ’554 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”);

IPR2020-01538  
Patent 10,588,554 B2

*Apple Inc. v. Masimo Corporation*, IPR2020-01539 (PTAB Sept. 2, 2020) (challenging claims 1–28 of the '554 patent);<sup>1</sup>

*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*, IPR2020-01524 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,433,776 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 B2); and

*Apple Inc. v. Masimo Corporation*, IPR2020-01537 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,588,553 B2).

Pet. 3–4; Paper 5, 1–3.

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<sup>1</sup> Pursuant to the Board's November 2019, Consolidated Trial Practice Guide, *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>, Petitioner filed a Notice ranking its two petitions that challenge the '554 patent, ranking first the instant proceeding and ranking second IPR2020-01539. Paper 2, 2. We decline to exercise discretion to deny institution in this case where (1) Patent Owner does not request that we exercise discretion to deny due to the presence of multiple petitions, (2) the two petitions challenge different, albeit overlapping, claim sets, and (3) Petitioner represents that, at the time of the filing, Patent Owner had not yet narrowed the claims asserted in the parallel district court litigation. Paper 2, 2–3; Ex. 1033 (reduction in claims due after petitions were filed).

Patent Owner further identifies the following pending patent applications, among other issued and abandoned applications, that claim priority to, or share a priority claim with, the '554 patent:

U.S. Patent Application No. 16/834,538;

U.S. Patent Application No. 16/449,143; and

U.S. Patent Application No. 16/805,605.

Paper 5, 1–2.

### *C. The '554 Patent*

The '554 patent is titled “Multi-Stream Data Collection System for Noninvasive Measurement of Blood Constituents,” and issued on March 17, 2020, from U.S. Patent Application No. 16/544,713, filed August 19, 2019. Ex. 1001, codes (21), (22), (45), (54). The '554 patent claims priority through a series of continuation and continuation-in-part applications to Provisional Application Nos. 61/078,228 and 61/078,207, both filed July 3, 2008. *Id.* at codes (60), (63).

The '554 patent discloses a two-part data collection system including a noninvasive sensor that communicates with a patient monitor. *Id.* at 2:38–40. The sensor includes a sensor housing, an optical source, and several photodetectors, and is used to measure a blood constituent or analyte, e.g., oxygen or glucose. *Id.* at 2:29–35, 64–65. The patient monitor includes a display and a network interface for communicating with a handheld computing device. *Id.* at 2:45–48.

Figure 1 of the '554 patent is reproduced below.

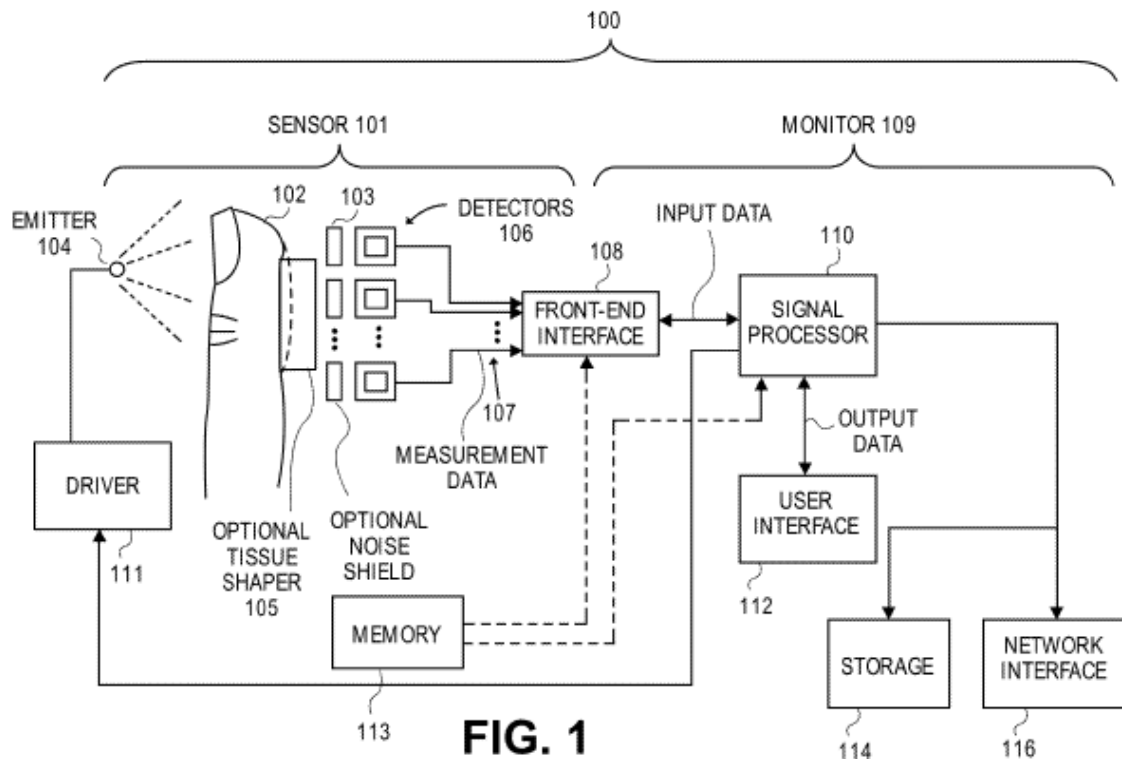


Figure 1 illustrates a block diagram of data collection system 100 including sensor 101 and monitor 109. *Id.* at 11:47–58. Sensor 101 includes optical emitter 104 and detectors 106. *Id.* at 11:59–63. Emitters 104 emit light that is attenuated or reflected by the patient’s tissue at measurement site 102. *Id.* at 14:3–7. Detectors 106 capture and measure the light attenuated or reflected from the tissue. *Id.* In response to the measured light, detectors 106 output detector signals 107 to monitor 109 through front-end interface 108. *Id.* at 14:7–10, 26–32. Sensor 101 also may include tissue shaper 105, which may be in the form of a convex surface that: (1) reduces the thickness of the patient’s measurement site; and (2) provides more surface area from which light can be detected. *Id.* at 11:2–14.

Monitor 109 includes signal processor 110 and user interface 112. *Id.* at 15:16–18. “[S]ignal processor 110 includes processing logic that

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