

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MASIMO CORPORATION,
Petitioner,

v.

APPLE INC.,
Patent Owner.

IPR2024-00071
Patent 10,076,257 B2

Before KEN B. BARRETT, JOSIAH C. COCKS, and
ROBERT L. KINDER, *Administrative Patent Judges*.

KINDER, Administrative Patent Judge.

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

I. INTRODUCTION

A. *Background and Summary*

Masimo Corporation (“Petitioner”)¹ filed a Petition requesting *inter partes* review of claims 6 and 7 of U.S. Patent No. 10,076,257 B2 (“the ’257 patent,” Ex. 1001). Paper 2 (“Pet.”). Apple Inc. (“Patent Owner”)² filed a Preliminary Response to the Petition. Paper 6 (“Prelim. Resp.”).

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.”).

Upon consideration of the Petition, the Preliminary Response, and the evidence of record, we exercise our discretion to deny institution of trial on this Petition under 35 U.S.C. § 314(a). Therefore, we do not institute an *inter partes* review as to the challenged claims of the ’257 patent.

B. *Related Matters*

Both parties identify, as a matter involving the ’257 patent, *Apple Inc. v. Masimo Corporation and Sound United, LLC*, No. 1:22 cv-01378-MN (D. Del.) (“the Delaware Litigation”). Pet. 2; Paper 4.

¹ Petitioner identifies Masimo Corporation as the real party-in-interest. Pet. 2.

² Patent Owner identifies Apple Inc. as the real party-in-interest. Paper 4.

The parties also identify the following USPTO proceedings challenging claims of the '257 patent: *Masimo Corporation v. Apple Inc.*, IPR2023-00745 (PTAB) (“the 745 IPR”); and *AliveCor, Inc. v. Apple Inc.*, IPR2023-00950 (PTAB) (“the 950 IPR”). Pet. 2; Paper 4.

C. The '257 Patent

The '257 patent is titled “Seamlessly Embedded Heart Rate Monitor” and “is directed to an electronic device having an integrated sensor for detecting a user’s cardiac activity and cardiac electrical signals.” Ex. 1001, codes (54), (57). The '257 patent’s “seamlessly integrated cardiac sensor . . . can be integrated in any suitable portion of the electronic device” including “a portion with which the user is typically in contact (e.g., an input mechanism or a housing held by the user), or metallic or conductive portions of the device.” *Id.* at 2:6–13. The '257 patent illustrates, in Figure 1, a schematic view of an electronic device for receiving the output of one or more sensors, and in Figure 3, a schematic view of the elements (including integrated leads) of the electronic device. *Id.* at 3:22–29.

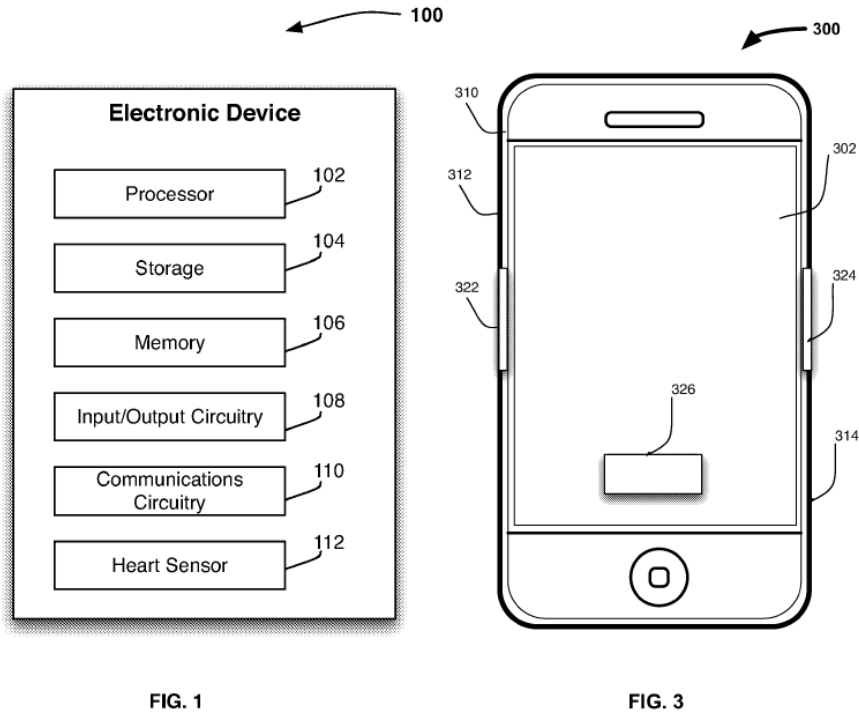


Figure 1 is a schematic view of an electronic device 100 for receiving the output of one or more sensors, and Figure 3 is a schematic view illustrating elements of such an electronic device having several integrated leads. *Id.* at 3:47–49, 8:13–16.

As shown in Figure 1, electronic device 100 includes control circuitry 102, storage 104, memory 106, input/output circuitry 108, communications circuitry 110, and heart sensor 112. *Id.* at 3:49–61. Control circuitry 102 includes processing circuitry or a processor operative to control the operations and performance of electronic device 100. *Id.* at 3:62–4:2. The control circuitry may be used to run operating system applications, firmware applications, media playback applications, media editing applications, and may also drive a display and process inputs received from a user interface. *Id.* Input/output circuitry 108 is operative to convert analog signals and other signals into digital data, and digital data into any other type of signal. *Id.* at 4:32–46. Input/output circuitry 108 may receive and convert physical contact inputs (e.g., from a multi-touch screen), physical movements (e.g.,

from a mouse or sensor), analog audio signals (e.g., from a microphone), or other input. *Id.* The digital data may be provided to, and received from, processor 102, storage 104, memory 106, heart sensor 112, or other component of electronic device 100. *Id.* Heart sensor 112 is operative to detect a user's heartbeat, heart rate, or other signal generated by the user's heart. *Id.* at 6:3–16. Thus, heart sensor 112 may serve as an EKG monitor. *Id.* Heart sensor 112 may include lead(s) connected to the exterior of the electronic device such that the user may contact one or more of the leads to provide an electrical signal associated with the user's heart to heart sensor 112. *Id.* The leads may be integrated in any suitable portion of the electronic device. *Id.* at 8:10–13. Figure 3 illustrates an electronic device having such integrated leads. *Id.* at 8:13–15. Cardiac signals detected by the heart sensor leads are analyzed by the processor, which generates, from the received signals, one or more characteristic quantities of the user's heartbeat or heart rate for authentication. *Id.* at 6:10–16.

Electronic device 300 illustrated in Figure 3 includes display 302 and bezel 310, and is portable such that a user can hold the electronic device with fingers extending against one of sides 312 and 314 of bezel 310, and the user's thumb extending against the other of sides 312 and 314. *Id.* at 8:15–40. Leads 322 and 324, which may include conductive pads, may be coupled to sides 312 and 314 of bezel 310, respectively, such that when the user holds the device, the user's thumb and fingers are placed in contact with leads 322 and 324. *Id.* Alternatively, bezel 310 may include any other suitable number of leads, or any other suitable distribution of leads along bezel 310 and in other portions of electronic device 300. *Id.* The leads detect the user's cardiac activity through the contact with the user's thumb

and fingers, and provide the detected activity to the electronic device processor for processing. *Id.*

Electronic device 300 may also include additional lead 326 embedded in or behind display 302, as shown in Figure 3. *Id.* at 8:40–52. Lead 326 is operative to detect a user’s heart activity as the user moves a finger across display 302, for example in the vicinity of or directly over lead 326 (e.g., as the user drags a finger over lead 326 to move a slider when unlocking the electronic device). *Id.* Using lead 326, the electronic device can detect an electrical signal from a different portion of the user’s body (e.g., leads 322 and 324 detect signals through a first hand, and lead 326 detects signals through the second hand), which can provide the processor with additional information for determining characteristics of the user’s cardiac activity. *Id.*

To prevent leads 322, 324 and 326 from shorting, electronic device 300 may include at least one non-conductive component positioned between each of leads 322, 324 and 326: for example, a rubber gasket can be positioned between leads 322 and 324 (in bezel 310) and lead 326 (in display 302). *Id.* at 8:53–60.

The ’257 patent explains that the cardiac electrical signals detected by leads 322, 324, and 326 may be faint or have particular characteristics that require materials having particular properties (e.g., silver-based compounds) to detect and transmit. *Id.* at 8:59–9:3. In such cases, although the material used for bezel 310 or other electronic device components can be conductive, its conductivity can be insufficient to transmit signals detected by lead 322 directly to lead 324 (e.g., shorting leads 322 and 324). *Id.* In accordance with the ’257 patent, this may allow leads 322 and 324 to be embedded directly in bezel 310 without the need for additional isolating material. *Id.*

Figures 4A and 4B of the '257 patent, reproduced below, illustrate electronic devices having bezels with embedded heart sensor leads. *Id.* at 3:30–36.

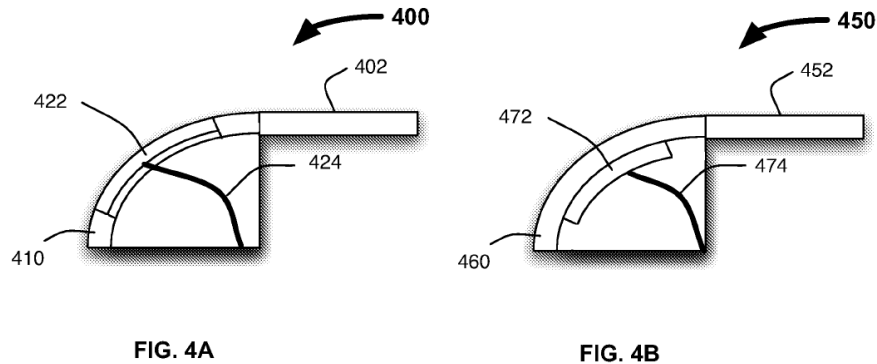


Figure 4A is a cross-sectional view of an electronic device 400 having a bezel 410 with an embedded heart sensor lead 422, and Figure 4B is a cross-sectional view of another electronic device 450 having a bezel 460 with an embedded heart sensor lead 472. *Id.* at 9:18–21, 9:35–40.

Electronic device 400 shown in Figure 4A includes display 402 and bezel 410. *Id.* at 9:18–35. Lead 422 may be embedded along the outer surface of bezel 410 such that lead 422 is exposed to the user during use. *Id.* Connector 424 may be coupled to the inner surface of lead 422 and extend into electronic device 400 to be coupled with the processor. *Id.* Electronic device 400 may further include an isolating layer positioned between lead 422 and bezel 410 (not shown in Figure 4A). *Id.* The isolating layer may be constructed from a suitable material having non-conductive properties. *Id.* Alternatively, if the material of bezel 410 is not conductive, or insufficiently conductive to cause several distinct leads 422 positioned on bezel 410 from shorting, no isolating layer may be necessary. *Id.*

Electronic device 450 in Figure 4B includes display 452 and bezel 460. *Id.* at 9:36–56. If the electrical conductivity and size of bezel 460, and the strength or characteristics of the cardiac signal provided by the user and

detected by the heart sensor are adapted such that the signal can be transmitted along short distances in bezel 460, lead 472 of the heart sensor may be positioned against the back surface of bezel 460. *Id.* Alternatively, lead 472 may be placed within the thickness of bezel 460 (e.g., in a pocket within the bezel wall), but underneath the outer surface of the bezel. *Id.* The short thickness of bezel 460 allows electrical signals to propagate from the user to the outer surface of bezel 460, through bezel 460, and into lead 472, which may in turn transmit the signals to the processor using connector 474. *Id.* In addition, if several leads are placed along different portions of bezel 460, the distance between adjacent leads may be sufficiently large (e.g., substantially larger than the thickness of bezel 460) that different leads of bezel 460 cannot detect the same electrical signal. *Id.* Thus,

if the electrical conductivity of portions of the electronic device enclosure and the leads are suitably selected and designed, the leads can be positioned underneath the exterior surface of the enclosure while providing sufficient conductivity for detecting cardiac electrical signals and avoiding shorting or interference between adjacent leads. For example, the sensor leads can be constructed from a silver based compound having high electrical conductivity, while the electronic device enclosure can be constructed from steel and aluminum, both having lower electrical conductivity. By placing several leads at substantially larger distances apart along the electronic device enclosure than the thickness of the enclosure, electronic signals can be transmitted through the steel or aluminum enclosure to a silver based lead underneath the enclosure, but not along the surface of the enclosure to cause adjacent leads to short.

Id. at 2:64–3:14.

Figure 5 of the '257 patent, reproduced below, illustrates an electronic device using portions of the bezel as leads. *Id.* at 3:37–39.

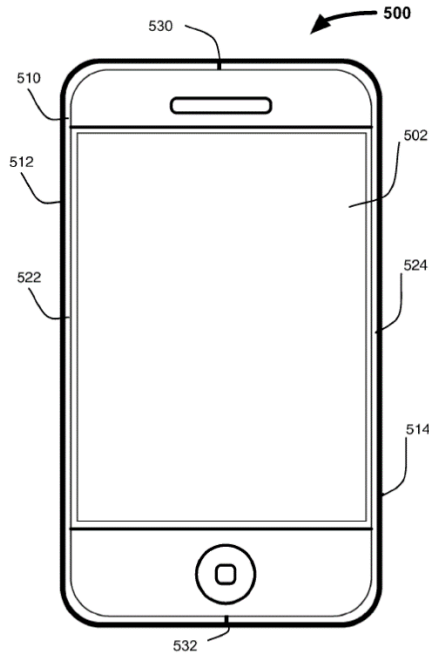


FIG. 5

Figure 5 illustrates another electronic device, in which portions of the bezel are used as leads. *Id.* at 3:37–39.

In Figure 5, entire portions of the bezel are used as leads for the heart sensor. *Id.* at 9:58–10:11. Electronic device 500 includes display 502 and bezel 510. *Id.* Bezel 510 is separated into several electrically isolated segments (522 and 524) which may be electrically isolated using isolating portions 530 and 532 constructed from a suitable non-conductive material (such as, for example, a composite material, a plastic, rubber, or other suitable material). *Id.* Bezel 510 may be separated into any suitable number of electrically isolated segments, and each segment may have any suitable size, where the sizes and distribution of each segment may be selected based on physiological considerations (such as where a user's hand will be positioned on the device, or aligning the segments to contact particular portions of the user's body). *Id.* Isolating portions 530 and 532 may be finished to resemble bezel 510. *Id.* at 10:12–23.

D. Illustrative Claim

Claims 6 and 7 are dependent claims. Claim 7 depends from claim 6, which in turn depends from claims 4 and 1. Claims 1, 4, 6, and 7 are reproduced below.

1. An electronic device for detecting a user's cardiac signal, comprising:

an enclosure;

a heart sensor configured to detect the user's cardiac signal, the heart sensor comprising:

a first lead comprising a first pad that is embedded in a first portion of the enclosure, wherein an exterior surface of the enclosure comprises an exterior surface of the first portion, wherein the first pad is positioned underneath the exterior surface of the first portion, and wherein the first pad is configured to detect a first electrical signal of the user's cardiac signal via the user's skin's contact with the exterior surface of the first portion of the enclosure; and

a second lead comprising a second pad that is embedded in a second portion of the enclosure, wherein the second pad is configured to detect a second electrical signal of the user's cardiac signal via the user's skin's contact with at least one of the second pad and the second portion of the enclosure; and

a processor coupled to the heart sensor and configured to receive and process the detected cardiac signal, wherein the first lead further comprises a first connector coupled to the first pad and configured to provide the first electrical signal detected by the first pad to the processor, and wherein the second lead further comprises a second connector coupled to the second pad and configured to provide the second electrical signal detected by the second pad to the processor.

4. The electronic device of claim 1, wherein:

the first portion is separated from the second portion by a third portion of the enclosure;

at least the third portion is constructed from a material having a first conductivity; and

the first conductivity is insufficient to transmit the first electrical signal from the first pad to the second pad via the third portion.

6. The electronic device of claim 4, wherein:

the exterior surface of the enclosure further comprises an exterior surface of the second portion;

the second pad is configured to detect the second electrical signal of the user's cardiac signal via the user's contact with the exterior surface of the second portion;

the second pad is positioned from the exterior surface of the second portion by a thickness of the second portion;

at least the thickness of the second portion is constructed from material having a second conductivity; and

the second conductivity is defined such that the second electrical signal is not able to be transmitted through material having the second conductivity over a distance larger than the thickness of the second portion.

7. The electronic device of claim 6, wherein:

the first pad and the second pad are positioned apart from one another at a distance larger than the thickness of the second portion by material having the second conductivity.

Ex. 1001, 12:21–49, 12:55–62, 13:1–18.

E. Evidence

Petitioner relies on the following references:

Name	Reference	Exhibit(s)
Markel	US 2007/0021677 A1, pub. Jan. 25, 2007	1005
Mills	US 5,351,695, iss. Oct. 4, 1994	1006
Stejskal	<i>Electrically Anisotropic Materials: Polyaniline Particles Organized in a Polyurethane Network</i> , Polymer International 44, 283–287 (1997)	1011
Stratbucker	US 5,678,545, iss. Oct. 21, 1997	1022
Batkin	US 2005/0239493 A1, pub. Oct. 27, 2005	1024
Larson	US 4,230,127, iss. Oct. 28, 1980	1025

Petitioner also relies on the declaration of Alan L. Oslan, (Ex. 1003) in support of its arguments.

F. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. §³	Reference(s)/Basis
6, 7	103	Batkin, Larson
6, 7	103	Markel, Mills, Stratbucker, Stejskal

³ The Leahy-Smith America Invents Act (“AIA”) includes revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. Because the earliest filed application identified in the ’257 patent has a filing date prior to that effective date (Ex. 1001, codes (60) and (63), 1:7–12), we apply the pre-AIA-versions of 35 U.S.C. §§ 102 and 103.

II. ANALYSIS OF DISCRETIONARY CONSIDERATIONS

A. Background of Proceedings and Parallel Litigation

Petitioner filed its petition in the 745 IPR on March 22, 2023, challenging the patentability of claims 1–4 and 8–22 of the '257 patent. On October 16, 2023, we instituted a trial in the 745 IPR on all challenged claims. Claims 6 and 7 were not challenged in the 745 IPR.

On June 7, 2023, AliveCor, Inc., challenged all claims of the '257 patent in the 950 IPR. We instituted a trial in the 950 IPR on January 9, 2024. This proceeding is also ongoing.

At the time the 745 IPR was filed, claims 6 and 7 of the '257 patent were not asserted in the Delaware Litigation against Petitioner Masimo. Claims 6 and 7 were added to the Delaware Litigation against Masimo on May 23, 2023. Pet. 81.

In the instant proceeding, the petition was filed on October 19, 2023, challenging claims 6 and 7 of the '257 patent. On November 8, 2023, the parties in the Delaware Litigation reached a “case narrowing agreement,” that dropped claims 6 and 7 from the Delaware Litigation. Ex. 2001 (identifying claims 1, 2, 3, 4, 8, 11, 12, 14 as asserted claims for Apple’s '257 patent). Thus, claims 6 and 7 of the '257 patent are no longer asserted against Petitioner Masimo in the Delaware Litigation. Each of the claims asserted by Apple in the Delaware litigation is also challenged by Masimo in the 745 IPR, which should be decided by October 16, 2024.

B. Legal Standards

The Board has discretion to decline institution of an *inter partes* review even if Petitioner demonstrates a reasonable likelihood of success. *See* 35 U.S.C. §§ 314(a), 325(d); *see also* 37 C.F.R. §§ 42.4(a) (the Board

institutes trial on behalf of the Director), 42.108(a) (stating “the Board *may* authorize the review to proceed” (emphasis added)); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that “the PTO is permitted, but never compelled, to institute an IPR proceeding”); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); Consolidated Trial Practice Guide (“CTPG”), 55 (Nov. 2019) (“Sections 314(a) and 324(a) provide the Director with discretion to deny a petition.” (citations omitted)).

In *General Plastic*, the Board articulated a list of factors to be considered in evaluating whether to exercise discretion under 35 U.S.C. § 314(a) to deny a petition that challenges a patent that was previously challenged before the Board. *General Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 15–16 (PTAB Sept. 6, 2017) (designated precedential as to Section II.B.4.i) (“*General Plastic*”); *see also* CTPG at 55–58 (stating that the Board will consider the *General Plastic* factors when determining whether to institute a trial). These factors are:

1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
3. whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition;
4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;

5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
6. the finite resources of the Board; and
7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

General Plastic, Paper 19 at 16 (citing *NVIDIA Corp. v. Samsung Elecs. Co.*, IPR2016-00134, Paper 9 at 6–7 (PTAB May 4, 2016)); *see also* CTPG at 56–57.

We now apply the *General Plastic* factors to the facts of this case.

C. Analysis of General Plastic Factors

Evaluation of *General Plastic* Factor 1

The first *General Plastic* factor asks “whether the same petitioner previously filed a petition directed to the same claims of the same patent.” *General Plastic*, Paper 19 at 16.

Petitioner argues this factor weighs in favor of institution because the Petition “challenges only claims 6 and 7 of the ‘257 patent, which were not challenged in Petitioner’s earlier-filed petition, IPR2023-00745. . . . [t]hus, this is not a follow-on petition under factor[] 1 . . . because it is not ‘directed to the *same claims* of the same patent.’” Pet. 80.

Patent Owner contends the first *General Plastic* factor favors denial of institution because: (i) Masimo is the same petitioner that previously filed a petition directed toward the ‘257 patent in the 745 IPR; and (ii) the 745 IPR is directed to the same claims 1 and 4 of the same ‘257 patent challenged in instant Petition. Prelim. Resp. 5–8.

We examine whether the Petitioner’s challenge of claims 6 and 7 is directed to the same claims challenged in the 745 IPR. Although the 745 IPR did not specifically challenge claims 6 and 7, these claims depend from and incorporate all of the subject matter of independent claim 1 and dependent claim 4, which were challenged in the 745 IPR. For Petitioner to prevail in its challenge of claims 6 and 7, the Petition must also be directed to claims 1 and 4, which indeed it is. *See* Pet. 24–40. Therefore, both the Petition and the 745 IPR are directed to claims 1 and 4. Moreover, examining the scope of each challenged claim, the petitions in both proceedings are directed to most of the same subject matter. For example, claim 6 recites previously introduced elements (“the exterior surface,” “the second portion,” “the second pad,”) from claims 1 and 4, but adds additional limitations to those elements.

Finally, Petitioner has not elaborated how we could issue a patentability determination for just claims 6 and 7 without also addressing the patentability of claims 1 and 4. To suggest claims 1 and 4 are not challenged again in this second petition is akin to a legal fiction. *See Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1344 (Fed. Cir. 2009) (“A broader independent claim cannot be nonobvious where a dependent claim stemming from that independent claim is invalid for obviousness.”) (citing *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1319 (Fed. Cir. 2007)); *see also Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1380 (Fed. Cir. 2022). Regardless, factor 1 examines whether the new petition is “directed to the same claims,” and we determine that the instant Petition is directed to the same claims 1 and 4.

Accordingly, because the Petition is directed to *some* of the same claims (*i.e.*, 1 and 4) and *much* of the same subject matter (*i.e.*, from independent claim 1) that were previously challenged in the 745 IPR, we determine that the first *General Plastic* weighs either neutral or slightly in favor of invoking our discretion to deny institution.

Evaluation of *General Plastic* Factor 2

The second *General Plastic* factor asks “whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it.” *General Plastic*, Paper 19 at 16.

Petitioner asserts this factor is neutral because the Petition relies on Batkin, Larson, Stratbucker, and Stejskal (“additional references”) to challenge claims 6 and 7, which were not challenged in the 745 IPR. Pet. 80–81. Petitioner asserts that they were unaware of these additional references at the time the 745 IPR was filed and that Patent Owner’s “assertion of claims 6 and 7 came as a surprise to Petitioner because the accused products in the Delaware Litigation do not contain any material that satisfies the specific conductivity properties required by claims 6 and 7.” *Id.* at 81. Petitioner submits that after Patent Owner asserted claims 6 and 7 for the first time in May 2023, and Petitioner “diligently searched for art that taught claims 6 and 7 and filed this petition shortly thereafter.” *Id.*

Patent Owner asserts that Petitioner knew of the Markel and Mills references because they were relied on in the 745 IPR. Prelim. Resp. 8. With respect to the additional references, Patent Owner argues that Petitioner has not explained why they could not have been found earlier with reasonably diligent searching. *Id.* at 9–10. Although Petitioner contends it was “not aware of these references” when the 745 IPR petition was filed,

Petitioner does not adequately explain how it readily identified these references once it decided to “diligently search[.]” for them. *Id.* at 9 (quoting Pet. 81).

The Petition relies on Batkin in combination with Larson for Ground 1; and Markel, Mills, Stratbucker, and Stejskal for Ground 2. *See* Pet. 17. With respect to Markel and Mills, because those references are relied on in the 745 IPR, we find that Petitioner knew of those references.

With respect to the additional references, Petitioner alleges that they did not know nor should have known of those additional references. First, Petitioner affirmatively states that they did not know of those references at the time of filing of the 745 IPR, nor does Patent Owner provide affirmative evidence to the contrary. Second, it would be speculative to find that Petitioner should have known of the additional references at the time the 745 IPR was filed because Patent Owner does not rebut Petitioner’s assertion that claims 6 and 7 require specific conductivity properties that Petitioner did not expect to be asserted and thus challenged at the Board. *See* Pet. 81; Prelim. Resp. 8–10.

Accordingly, because Petitioner knew of Markel and Mills but appears to not have known nor should have known of the additional references, we determine that the second *General Plastic* factor is neutral.

Evaluation of *General Plastic* Factor 3

The third *General Plastic* factor asks “whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition.” *General Plastic*, Paper 19 at 16.

Petitioner submits this factor is neutral because “[w]hile Patent Owner filed a preliminary response in IPR2023-00745, those concerns are absent because this IPR addresses different claims” and “the Ground 2 arguments directed to base claims 1 and 4 are substantially identical to the arguments presented in IPR2023-00745, while the Ground 1 arguments are based on entirely new art.” Pet. 81–82. Petitioner urges these circumstances show that Petitioner “has not benefitted from the fact that a preliminary response was filed in the prior IPR.” *Id.*

Patent Owner responds that this factor weighs against institution because the timing of Petitioner’s staggered second Petition creates unfairness, inefficiency, and potential for abuse. Prelim. Resp. 10. Patent Owner submits that when crafting its arguments presented in this Petition, Petitioner had in hand both Patent Owner’s preliminary response and the Board’s decision on whether to institute the 745 IPR. *Id.* at 10–11. Patent Owner asserts that Petitioner has attempted to bolster its analysis of Markel and Mills with respect to the elements of claims 1 and 4 in this Petition—including “adding new mappings of the Markel-Mills combination to claims 1 and 4 in its second Petition” such as “an entirely new mapping of Markel to claim 1 based on pushbuttons having electrodes as shown in FIG. 2 of Markel” and “additional arguments regarding motivations to combine Markel with Mills”—in direct response to arguments raised in Patent Owner’s Preliminary Response in the 745 IPR and based on weaknesses identified in the 745 IPR. *Id.* at 10–20.

On this record, we have significant “road mapping” concerns. By way of background, it is undisputed that the instant Petition was filed: (i) seven months after filing the 745 IPR, (ii) five months after Patent Owner

asserted claims 6 and 7, (iii) five days after Patent Owner filed its preliminary response in the related 950 IPR, and (iv) three days after the Board issued its institution decision in the 745 IPR. Examining the papers from the related proceedings, there is significant overlap in the evidence and arguments, including: (i) the 745 IPR challenges claims 1 and 4 with Markel and Mills, and (ii) the 950 IPR challenges claims 1, 4, 6, and 7 with Markel as a primary reference. By the time Petitioner filed the instant Petition, Petitioner already received: (i) Patent Owner's preliminary response to the 745 IPR, (ii) the Board's Institution Decision in the 745 IPR (and the concerns articulated therein), and (iii) Patent Owner's preliminary response to the 950 IPR.

We agree with Patent Owner that, in the instant Petition, Petitioner has modified its prior positions to account for both arguments made in preliminary responses, as well as concerns identified by the panel in the 745 IPR decision to institute. *See* Prelim. Resp. 11. Claims 6 and 7 depend from claims 1 and 4. Masimo has bolstered its analysis of Markel and Mills with respect to certain elements of claim 1 and its reasons for combining the references in this second Petition. For example, Petitioner added new mappings of the Markel-Mills combination to address claim 1 in direct response to concerns identified by Patent Owner and by the panel in the 745 IPR. *See id.* at 11–13. Addressing limitation 1[b(i)], Petitioner added a new mapping of Markel based on pushbuttons having electrodes as shown in Figure 2 of Markel. *See* Pet. 51–52. Petitioner even identified this discussion of Figure 2 as “a second mapping of the claims.” *Id.* This second mapping of claim 1 based on Figure 2, and the corresponding analysis,

appear nowhere in the analysis of claim 1 (or claim 4) in Masimo's 745 IPR petition.

The new embodiments relied on and modified arguments addressing claim 1 of the '257 patent suggest that Petitioner is using the prior proceedings as a roadmap to address issues to its first petition in the 745 IPR. Accordingly, this factor weighs strongly in favor of invoking our discretion to deny institution.

Evaluation of *General Plastic* Factors 4 and 5

The fourth *General Plastic* factor considers “the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition.” *General Plastic*, Paper 19 at 16. The fifth *General Plastic* factor queries “whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent.” *Id.*

Petitioner submits factor 4 is neutral because Petition was not aware of the additional references when the 745 IPR was filed but “[a]fter Patent Owner asserted those claims for the first time in May 2023, Petitioner diligently searched for art that taught claims 6 and 7 and filed this petition shortly thereafter.” Pet. 81.

Petitioner submits factor 5 weighs in favor of institution because the instant Petition is not directed to the same claims as the 745 IPR and because the time lapse was caused by Patent Owner's later assertion of the challenged claims. Pet. 80–81. First, Petitioner argues that the instant Petition is not directed to the same claims as the 745 IPR because the instant Petition challenges only claims 6 and 7 whereas the 745 IPR did not

challenge those claims. Second, Petitioner only challenged claims 6 and 7 after they were added to the Delaware Litigation, which was after the 745 IPR was filed. *Id.* at 80–81. Petitioner asserts that they were surprised by the assertion of claims 6 and 7 whereas “the accused products in the Delaware Litigation do not contain any material that satisfies the specific conductivity properties required by claims 6 and 7.” *Id.* at 81.

Patent Owner contends these factors weigh against institution because Petitioner provides insufficient justification for the seven-month delay to file the instant Petition after filing the 745 IPR. Prelim. Resp. 20–24. Patent Owner argues that “this delay gave Masimo the unfair advantage of having both Apple’s Preliminary Response and the Board’s Institution Decision from the earlier proceeding in hand at the time the instant Petition was filed.” *Id.* at 20–21.

Patent Owner presents four main arguments related to these factors. First, Patent Owner submits that Petitioner still challenged claims 15–22 in the 745 IPR despite those claims not being asserted by Patent Owner in the Delaware Litigation. *Id.* at 21. Second, Patent Owner contends that claims 6 and 7 were added to the Delaware Litigation two months after the 745 IPR and that “simply does not justify Masimo’s additional five-month delay in filing this serial Petition.” *Id.* at 21–22. Moreover, Patent Owner submits that claims 6 and 7 have since been dropped from the Delaware Litigation. *Id.*; see Ex. 2001. Third, Patent Owner submits that the length of time that elapsed between when Petitioner learned of the prior art asserted in this Petition and the filing of this Petition is unknown because Petitioner did not address when it first learned of the additional references. Prelim. Resp. 22.

Fourth, Patent Owner argues that Petitioner’s delay is not justified and raises fairness concerns. *Id.* at 22–24.

As noted above, the record reasonably conveys that Petitioner knew of the Markel and Mills references when it filed the instant Petition, and Petitioner does not reveal when exactly it learned of the additional references. Petitioner contends that the two petitions challenge distinct claim sets in response to distinct assertions made by Patent Owner in the Delaware Litigation, but does not provide any other explanation for the filing of the instant petition or the additional five-month delay between Patent Owner’s assertions and the filing of the instant Petition. *See* Pet. 80–81. Moreover, as noted above, claims 6 and 7 were dropped from the Delaware Litigation. Further, we determine that the overlap in claimed subject matter and contentions between the two petitions is significant — we cannot reach the patentability of claims 6 and 7 without also determining the patentability of claims 1 and 4 from which they depend. Based on the record before us, we are not persuaded that the seven-month delay in filing the second petition was justified because Petitioner has not provided adequate explanation for the time elapsed between the filing of the two petitions.

Accordingly, these factors weigh in favor of invoking our discretion to deny institution.

Evaluation of *General Plastic* Factors 6 and 7

The sixth *General Plastic* factor considers “the finite resources of the Board.” *General Plastic* at 16. The seventh *General Plastic* factor considers “the requirement . . . to issue a final determination not later than 1 year after the date on which the Director notices institution of review.” *General Plastic*, Paper 19 at 16.

Petitioner argues factors 6 and 7 “weigh in favor of institution or are at worst, neutral” because “this IPR challenges only two claims, [so] this IPR should not negatively impact the finite resources of the Board or prevent a final determination within the one-year statutory deadline,” and “instituting this petition would promote efficiency because, in combination with IPR2023-00745, the Board can address all of the challenged claims of the ’257 patent.” Pet. 82–83.

Patent Owner submits these factors weigh against institution because institution of this Petition would result in a significant waste of the Board’s resources and prejudice Patent Owner. Prelim. Resp. 24–26. Patent Owner argues that institution of this Petition would “lead to two offset proceedings involving numerous overlapping issues, including claim construction and applicability of the Markel-Mills combination to claims 1 and 4.” *Id.* at 24. Patent Owner asserts that the offset timing of the two proceedings would be advantageous to Petitioner and force the Board to address overlapping issues in the serial proceedings based on two “different evidentiary records.” *Id.* at 25–26.

We recognize that there is overlap in proceedings that would create some degree of efficiency. In view of this overlap between the prior art references and claim limitations in the 745 IPR and the present Petition, the most efficient way to manage the two *inter partes* reviews would have been to coordinate or consolidate the proceedings and adopt a common schedule. Because Petitioner waited seven months (and five months after Patent Owner asserted the challenged claims 6 and 7) to file this Petition, it is no longer feasible for the Board to adjust due dates to coordinate the proceedings and meet the one-year statutory deadline for the 745 IPR. The

Board must issue a final written decision in the 745 IPR by October 16, 2024 (approximately six months after this Decision). Thus, instituting a second *inter partes* review for the instant Petition would require an entirely separate proceeding involving a conflicting evidentiary record as noted above.

Regardless of timing, the two proceedings would have different evidentiary records, including resolution of a motion to amend in the 745 IPR, and weighing different mappings of the same prior art to claim 1. Moving forward with separate proceedings involving some overlapping issues but also having different evidentiary records and schedules, would be an inefficient use of the Board's resources.⁴

Unlike in *Code200, UAB v. Bright Data, Ltd.*, IPR2022-00861, Paper 18 (Office of the Director of the USPTO Aug. 23, 2022) (precedential)—where institution on the first petition had been discretionarily denied and, thus, no challenges to the patent had been evaluated on the merits—here a substantial and important portion of Petitioner's challenges, namely those directed to claims 1 and 4, are the subject of the instituted 745 IPR. We also note that claims 6 and 7 are the subject of the instituted 950 IPR, albeit in the context of challenges by another petitioner. Thus, it is expected that all of the claims challenged in the current Petition will be evaluated on the merits by the Board. Given the above-noted circumstances, we agree with Petitioner that these factors are “neutral” in our analysis. *See* Pet. 82.

⁴ We also note that claims 6 and 7 are no longer asserted by Patent Owner in the Delaware Litigation. *See* Prelim. Resp. 21; Ex. 2001.

III. CONCLUSION

“Multiple, staggered petitions challenging the same patent and same claims raise the potential for abuse.” *General Plastic*, Paper 19 at 17. The instant Petition was filed by Petitioner about seven months after the institution in the 745 IPR and indirectly challenges claims 1 and 4 of the same patent, with the addition of claims 6 and 7. Based on the record before us, including Petitioner’s access to preliminary responses and our institution decisions in related proceedings, there is substantial evidence of “road-mapping” and Petitioner modifying arguments. Taking a holistic view of the totality of the circumstances presented, on this record, we exercise our discretion under § 314(a) and do not institute an *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review is *denied* and no *inter partes* review is instituted.

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