

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALIVECOR, INC.,
Petitioner,

v.

APPLE INC.,
Patent Owner.

Case IPR2023-00949
Patent 10,866,619 B1

Before KEN BARRETT, SCOTT A. DANIELS, and
ROBERT L KINDER, *Administrative Patent Judges*.

DANIELS, *Administrative Patent Judge*.

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

I. INTRODUCTION

AliveCor Inc., (“AliveCor” or “Petitioner”), filed a Petition requesting *inter partes* review (“IPR”) of claims 11–20 of U.S. Patent No. 10,866,619

B1 (Ex. 1001, “the ’619 patent”). Paper 2 (“Pet.”). Concurrently, and in accordance with guidance in our Consolidated Trial Practice Guide, (“Trial Practice Guide” or “CTPG”), Petitioner explained in a paper titled “Petitioner’s Reasons for Parallel Petitions and Petition Ranking,” several arguments and associated reasoning for filing two parallel petitions challenging different claims in the ’619 patent.¹ Paper 3 (“Pet. Reasons”). Petitioner challenges claims 11–20 of the ’619 patent here in IPR2023-00949, and challenges claims 1–10 of the ’619 patent in concurrently filed IPR2023-00948.

Apple Inc., (“Apple” or “Patent Owner”) filed a Preliminary Response to the Petition, mainly objecting to Petitioner’s Reasons for Parallel Petitions and Petition Ranking. Paper 7 (“Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the arguments and evidence presented by Petitioner and Patent Owner, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims. *See* 35 U.S.C. § 314(a). Accordingly, we institute an *inter partes* review of the challenged claims in this proceeding.

As explained below, we are also persuaded to exercise our discretion to institute trial on parallel petition IPR2022-00948 challenging claims 1–10 of the ’619 patent.

¹ Our CTPG is available at <https://www.uspto.gov/about-us/news-updates/consolidated-trial-practice-guide-november-2019>

A. Real Parties in Interest

Petitioner states that AliveCor Inc., is the real party in interest. Pet. 111. Patent Owner states that Apple Inc., is the sole real party in interest. Paper 4, 1.

B. Related Matters

The parties indicate that the '619 patent is at issue in *Apple Inc. v. AliveCor, Inc.*, Case No. 4:22-cv-07608, in the U.S. District Court for the Northern District of California. Pet. 111; Paper 4, 1.

Petitioner indicates that it has filed another request for *inter partes* review including the '619 patent, namely IPR2023-00948. Pet. 111. Petitioner indicates it has also filed a request for *inter partes* review of U.S. Patent No. 10,076,257 in IPR2023-00950. *Id.*

C. The '619 Patent (Ex. 1001)

The '619 patent issued December 15, 2020 and is titled “Electronic Device Having Sealed Button Biometric Sensing System.” Ex. 1001, code (54). The '619 patent describes a biometric button assembly having an input member, e.g., a button, that is configured to receive inputs, for example a fingerprint and finger press from a user of the electronic device. *Id.* at Abstr. Figure 1 of the '619 patent is reproduced below as annotated by the Board.

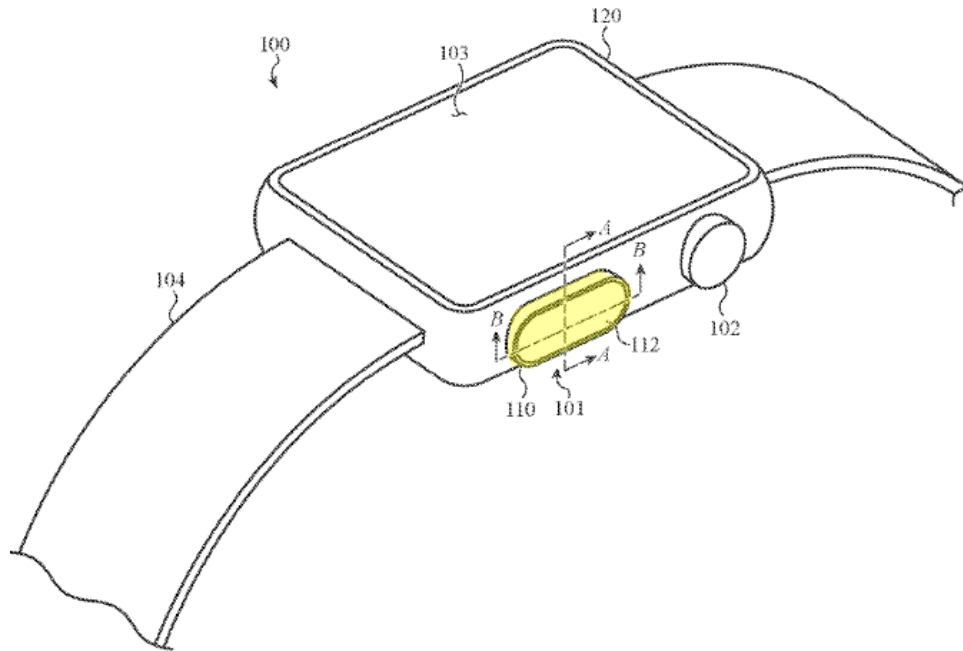


FIG. 1

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Figure 1 illustrates electronic device 100, e.g., a watch, including biometric button assembly 110 highlighted in yellow. Figure 2 B, as highlighted by the Board, is reproduced below,

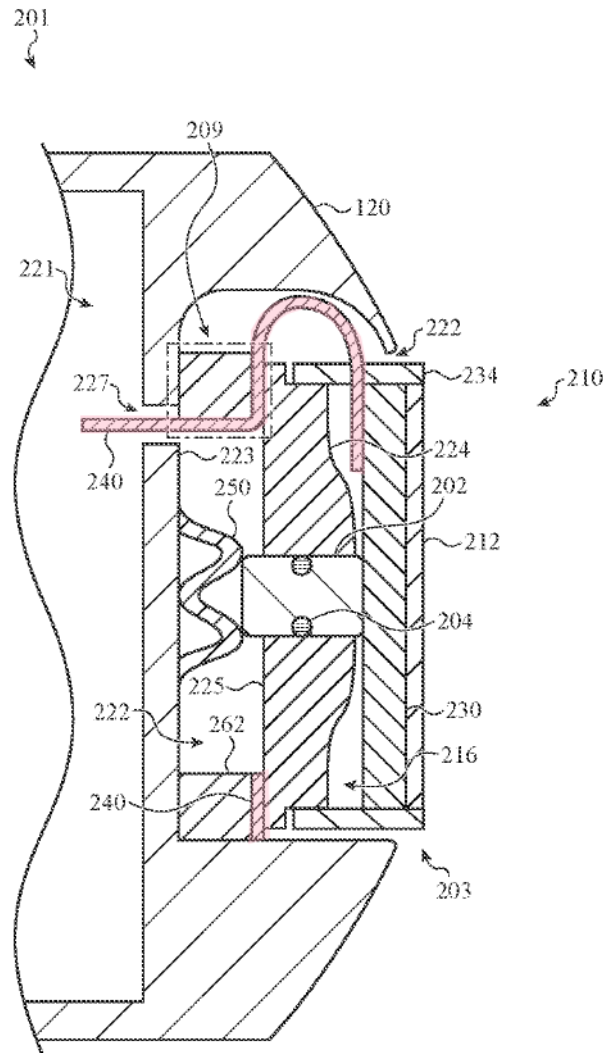


FIG. 2B

Figure 2B reveals a cross sectional view of biometric button assembly 210 in a depressed state, including button housing 203, sensor 230 and flexible conduit 240, highlighted pink, that “receives the output signal of the biometric sensor 230 and provides the output signal to the processor of the electronic device 100.” *Id.* at 9:11–13. The ’619 patent explains that

the biometric sensor 230 may be a fingerprint sensor of an array of capacitive sensing elements. Upon a user touch to the input surface 212, the biometric sensor 230 senses a change in capacitance or a value of capacitance of the array of capacitive sensing input surface 212. The biometric sensor 230 produces an

output signal that includes the sensor measurements. The output signal corresponds to a fingerprint of the user. The output signal may be processed to determine the user fingerprint. The output signal is processed by a processor positioned in an enclosed volume 221 of the electronic device.

Id. at 9:1–10.

With regards to claim 11, and specifically limitation [11g] as reproduced below, the '619 patent describes further that the “flexible conduit or flexible connector [240] that transmits an output signal from the biometric sensor [230] to the processor may form part of a seal that blocks or inhibits the ingress or entry of foreign debris or contaminants into the enclosure 120.” *Id.* at 5:56–60.

D. Illustrative Claim

Claims 11 and 16 are independent.² Each of dependent claims 12–15 and 17–20 ultimately depend from independent claims 11 and 16 respectively. Claim 11 illustrates the claimed subject matter and is reproduced below with limitation [11g] highlighted in italics:

[11pre] A fingerprint sensing system for a wearable device comprising:

[11a] an enclosure defining an enclosed volume and an opening along an exterior surface;

[11b] a processor disposed in the enclosed volume;

[11c] a button assembly positioned in the opening and defining an input surface, the button assembly comprising:

[11c i] a fingerprint sensor positioned inward from the input surface;

² For consistency we use Petitioner’s references [11pre]–[11g] corresponding to the same claim limitations.

[11c ii] a retainer positioned inward from the input surface and defining a sealing surface;

[11d] a seal disposed between the sealing surface of the retainer and a surface of the opening;

[11e] a passage extending from the opening to the enclosed volume;

[11f] a flexible conduit electrically connecting the fingerprint sensor to the processor;

wherein:

[11g] *a portion of the flexible conduit is sandwiched between the seal and the sealing surface of the retainer or between the seal and the surface of the opening.*

Ex. 1001, 27:54–28:9.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–10 would have been unpatentable based on the following grounds:³

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	11, 14, 16, 19	102/103	Kim ⁴
2	11–14, 16–20	103	Kim
3	11–14, 16–17, 19– 20	103	Jung ⁵ and Meyers ⁶
4	11–17, 19	102/103	Chang ⁷

³ Petitioner supports its challenge with a Declaration of Ronald D. Berger, M.D., Ph.D. (Ex. 1003). *See infra*. Patent Owner has not submitted declaration testimony at this stage.

⁴ Ex 1004, US Patent No. 10,620,828 B2 (Apr. 14, 2020).

⁵ Ex. 1005, US Patent Appl’n Pub. No. 2016/0100499 A1 (Apr. 7, 2016).

⁶ Ex. 1007, US Patent Appl’n Pub. No. 2015/0071509 A1 (Mar. 12, 2015).

⁷ Ex. 1010, US Patent No. 10,133,910 B2 (Nov. 20, 2018).

II. ANALYSIS

A. Legal Standards

A “prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). “A single prior art reference may anticipate without disclosing a feature of the claimed invention if such feature is necessarily present, or inherent, in that reference.” *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 958 (Fed. Cir. 2014).

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. 35 U.S.C. § 103; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 50–51 (1966)). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art at the time of the '619 patent

would have been a person with a working knowledge of physiological monitoring technologies, a Bachelor of Science degree in an academic discipline emphasizing the design of electrical, computer, or software technologies, and training or at least one to two years of related work experience with capture and processing of data or information, including but not limited to physiological monitoring technologies.

Pet. 8 (Ex. 1003 ¶¶ 37–38). Petitioner also asserts that “[m]ore education can supplement practical experience and vice versa.” *Id.*

Patent Owner does not expressly address the level of ordinary skill in the art. *See generally* Prelim. Resp.

On this record, Petitioner’s proposed level of ordinary skill in the art is not disputed and is consistent with our review and understanding of the technology and descriptions in the '619 patent and the asserted prior art references. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For purposes of this Decision, we rely on Petitioner’s proposed level of ordinary skill in the art.

C. Claim Construction

We interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2020). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.* Furthermore, at this stage in the proceeding, we expressly construe the claims only to the extent necessary to determine whether to institute *inter partes* review. *See Nidec Motor Corp. v.*

Zhongshan Broad Ocean Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

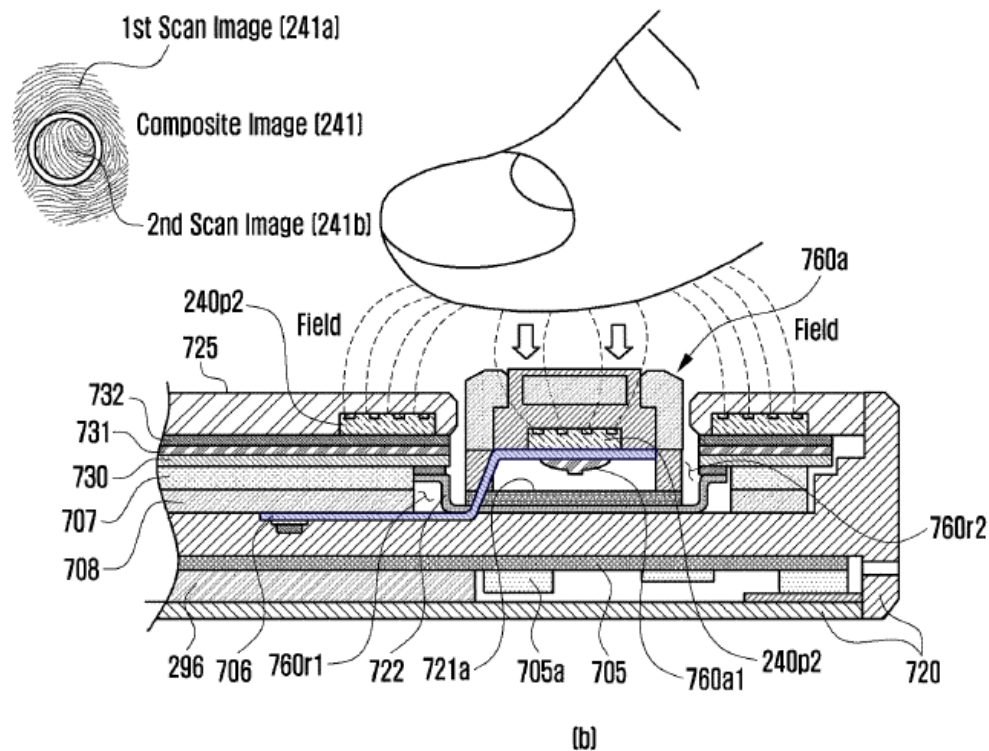
Neither Patent Owner nor Petitioner indicate that any claim terms require construction. *See generally*, Petition; Prelim. Resp. For purposes of this Decision where no claim terms are in dispute we need not explicitly construe any claim terms.

D. Ground 1: Claims 11, 14, 16, and 19—Alleged Anticipation, or Alternatively Obviousness, over Kim (Ex. 1004)

On this record, Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 11, 14, 16, 19 are anticipated by Kim, or alternatively obvious in view of Kim, for the reasons explained below.

1. Kim (Ex. 1004)

Titled “Electronic Device Having Combined Button,” Kim teaches an electronic device such as a mobile phone or tablet including housing 720, a physical button 760a located in an opening of housing 720, and a processor located within housing 720 connected to button 760a. *See* Ex. 1004, Abstr. (“[A] processor located inside the housing and electrically coupled to the display and the mechanical button.”), 4:19–21. Kim’s Figure 10(b), below, as annotated by the Board, illustrates physical button 760 and capacitive finger print sensor 240p2 as well as flexible printed circuit board (“PCB”) 706 (highlighted blue) sandwiched between sealing rubber 722 and the housing.



Kim describes that “[w]hen the fingerprint sensor is the capacitive fingerprint sensor 240p2, the capacitive fingerprint sensor 240p2 may be located inside the physical button 760a and mounted on the flexible PCB 706.” *Id.* at 20:62–65.

2. Independent Claim 1

We consider initially the elements of claim 11.

a) Petitioner’s Arguments

(1) Preamble – [11pre] A fingerprint sensing system for a wearable device comprising

Petitioner argues that Kim teaches an electronic device such as a mobile phone “disclos[ing] a ‘**capacitive fingerprint sensor 240p2** embedded in the physical button 760a.’” Pet. 10 (quoting Ex. 1004, 20:57–59). And that “Kim also teaches ‘[t]he electronic device 701 may compose fingerprint images.’” *Id.* (quoting Ex. 1004, 21:67–22:1).

(2) *Limitation [11a] – an enclosure defining an enclosed volume and an opening along an exterior surface:*

Providing an annotated version of Kim’s Figure 18 reproduced below, Petitioner argues that “*Kim* discloses an enclosure having an enclosed volume, teaching a ‘housing 720’ and ‘cover glass 725.’” *Id.* at 11 (citing Ex. 1004, 22:4–27; Ex. 1022 ¶¶ 175–178; Ex. 1003 ¶¶ 103–104).

FIG. 18

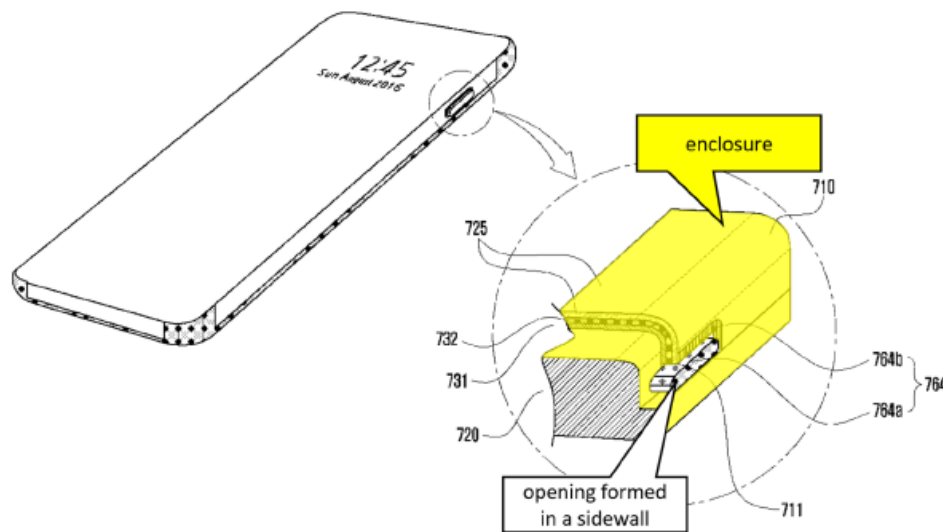


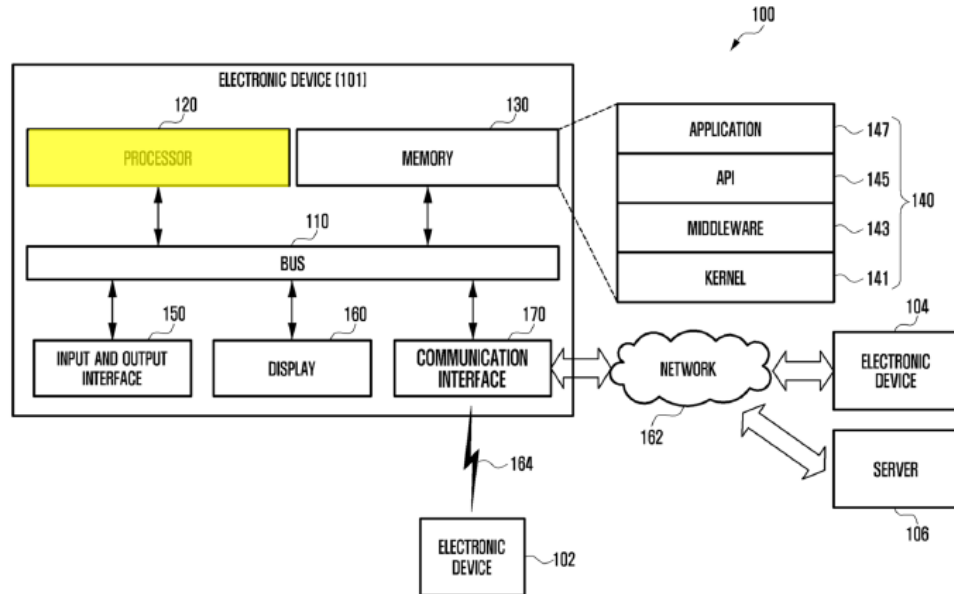
Figure 18 of Kim, as annotated by Petitioner, illustrates a mobile phone having housing or “enclosure,” 720 and button 764a positioned in the enclosure sidewall and an opening formed in the enclosure to accommodate the button.

(3) *Limitation [11b] – a processor disposed in the enclosed volume;*

Petitioner argues that “*Kim* discloses ‘a processor located *inside* the housing.’” *Id.* at 14 (quoting Ex. 1004, 2:7–11); *see also* Ex. 1004, Abstr., Figs. 1–3, 1:38–2:38, 5:1–28; Ex. 1022 ¶¶ 5–7, 17–19). Kim illustrates in

Figure 1, as annotated by Petitioner and reproduced below, processor 120 within electronic device 101.

FIG. 1



Kim's Figure 1 as annotated by Petitioner illustrating in diagrammatic form electronic device 101 including, *inter alia*, processor 120, memory 130, and communication interface 170. Petitioner argues that a person of ordinary skill in the art "would have understood that *Kim*'s processor would be in the enclosed volume because the enclosed volume exists to protect it from potentially damaging external stimuli." *Id.* (citing Ex. 1003 ¶¶ 114–115).

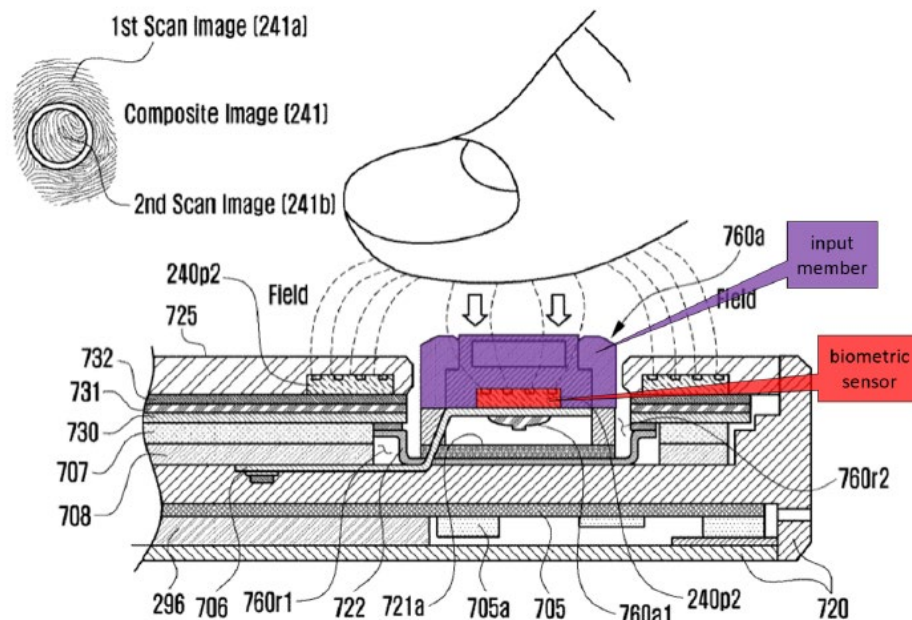
(4) *Limitation [11c]—a button assembly positioned in the opening and defining an input surface, the button assembly comprising:*

[11c i] a fingerprint sensor positioned inward from the input surface; and

[11c ii] a retainer positioned inward from the input surface and defining a sealing surface;

For these limitations Petitioner points to Kim's Figure 10b illustrating a person's finger in close proximity to physical button, i.e., input member,

760a incorporating biometric sensor 240p2. Figure 10b as annotated by Petitioner is reproduced below.



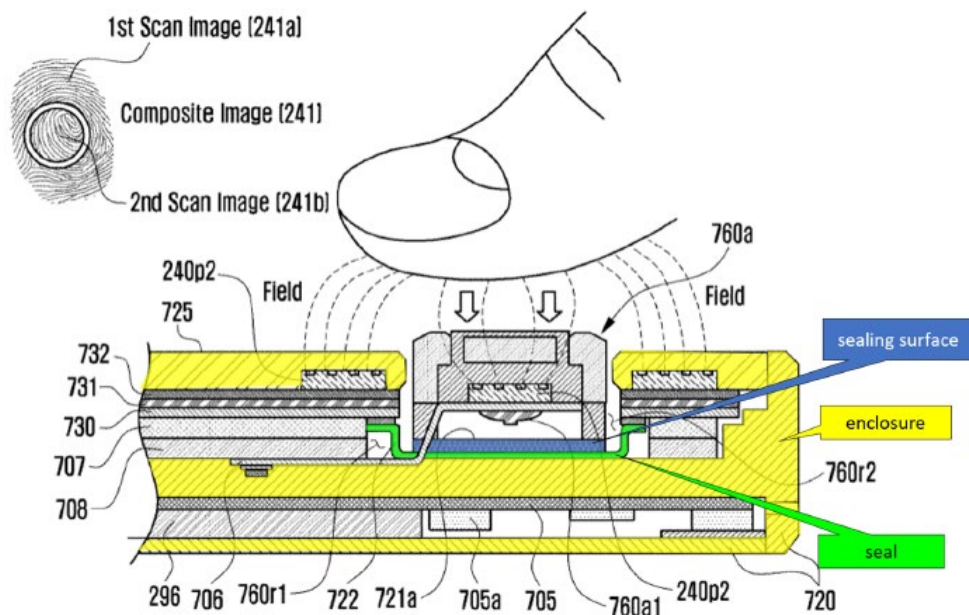
Kim’s Figure 10b illustrates in cross section capacitive fingerprint sensor 240p2 located inside and below physical button 760a and an input surface on the top of the button where a user’s finger is applied. Ex. 1004, 20:62–65.

Petitioner’s declarant, Dr. Berger, testifies that “*Kim* discloses a ‘combined button’ with a surface that similarly may be touched, pressed, or otherwise interacted with by a user in order to move downward, *Kim* discloses ‘button assembly positioned in the opening and defining an input surface’ the same way as the ’619 patent’s specification.” Ex. 1003 ¶ 122 (citing Ex. 1004, 13:42–67, 16:48–17:12). For limitation [11c i], considering Figure 10b and supported by Dr. Berger’s testimony, Petitioner argues that “*Kim* discloses that the ‘combined button’ includes a fingerprint sensor positioned in ward from the input surface, as illustrated in at least *Kim*’s Figure 10(b).” Pet. 16 (citing Ex. 1003 ¶ 126).

With respect to the limitation [11c ii] and the claimed “retainer positioned inward from the input surface and defining a sealing surface,” Petitioner argues that “*Kim* discloses a ‘support fixture 721a’ (Ex. 1004, 22:28-34; Ex. 1022, ¶179), which includes the claimed ‘sealing surface.’” *Id.* at 19 (citing Ex. 1003 ¶ 133). Dr. Berger testifies that like the retainer 224 described in the ’619 patent “the support fixture 721a of *Kim* likewise serves as ‘a stop to the displacement of the button housing’ and includes a ‘lower surface [that] forms a sealing surface . . . for the button assembly.’” Ex. 1003 ¶ 134 (citing Ex. 1001, 16:54–60).

(5) *Limitation [11d] – a seal disposed between the sealing surface of the retainer and a surface of the opening;*

Petitioner argues that “*Kim* discloses use of ‘sealing rubber 722’ . . . which creates the claimed ‘seal.’” Pet. 21 (citing Ex. 1004, 20:27–50, 22:28–42; Ex. 1022 ¶¶ 156–159, 179–181). To demonstrate what Petitioner refers to as the claimed “seal,” we reproduce below Petitioner’s annotated version of *Kim*’s Figure 10b.



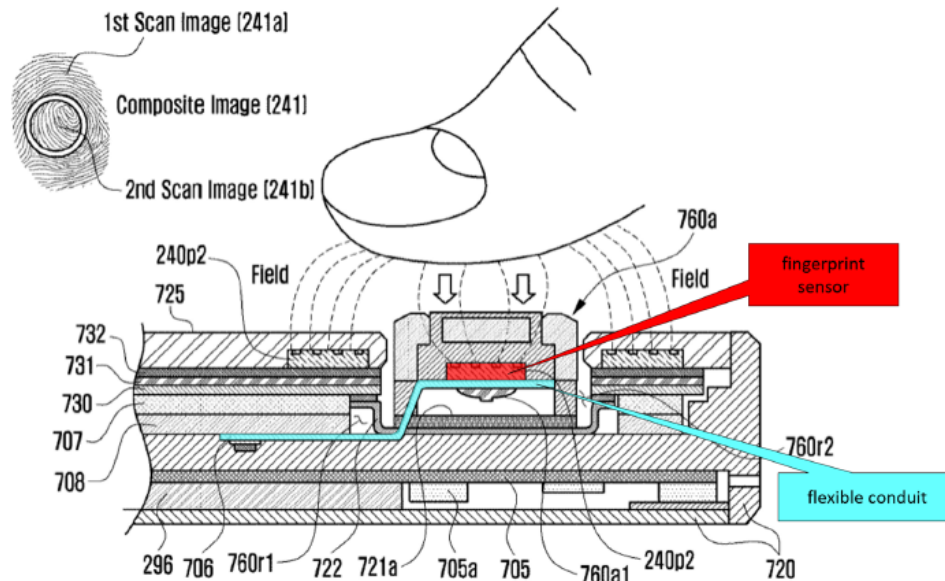
Petitioner asserts that “Figure 10(b) (annotated above) discloses that ‘sealing rubber 722’ (green) is positioned between a sealing surface of the button assembly (blue) and the enclosure (yellow).” *Id.* at 22 (citing Ex. 1003 ¶ 140).

(6) Limitation [11e] – a passage extending from the opening to the enclosed volume;

Petitioner argues that Kim’s “opening contains a button assembly which includes electrical components, such as a fingerprint sensor.” *Id.* at 23. Petitioner points out that “*Kim* also teaches the battery for the electronic device and main PCB are located inside the enclosed volume.” *Id.* (citing Ex. 1004, 22:4–9; Ex. 1022 ¶ 175; Ex. 1003 ¶¶ 144–145). Dr. Berger explains that “because *Kim* includes electrical components located in the opening of the enclosure which are separated from a power supply by the enclosure wall, a person of ordinary skill in the art would understand that in order for the electrical components to function, there necessarily needs to be a passage extending from the opening to the enclosed volume.” Ex. 1003 ¶ 146.

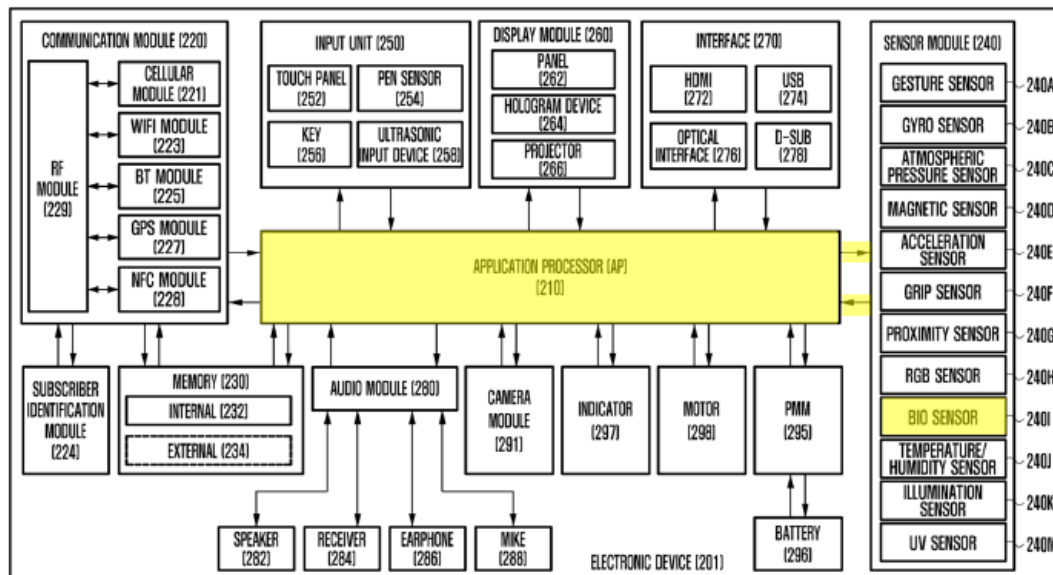
(7) Limitation [11f] – a flexible conduit electrically connecting the fingerprint sensor to the processor; wherein

Providing the annotated Figure 10b from Kim reproduced below, Petitioner argues that “*Kim* discloses a ‘flexible PCB 706,’ which corresponds to the claimed ‘flexible conduit’ of element [11f].” Pet. 24 (citing Ex. 1004, 22:9–27).



Petitioner's annotated Figure 10b from Kim, illustrating fingerprint sensor 240p2, highlighted red, connected to flexible conduit, highlighted teal. With regards to the fingerprint sensor being connected to a processor, Petitioner offers the following annotated version of Kim's Figure 2 below. *Id.* at 26.

FIG. 2

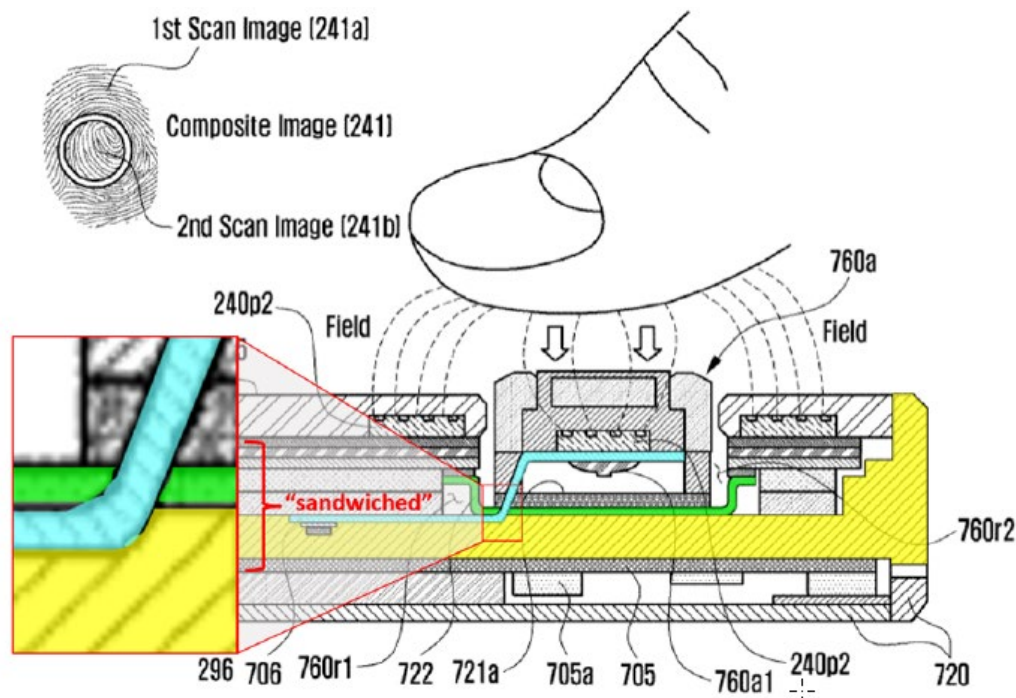


Consistent with the other figures and embodiments described by Kim, Figure 2 as annotated by Petitioner, illustrates in a block diagram data transmission

and communication between bio sensor 240 and processor 210 in electronic device 201. Dr. Berger testifies that “[a] person of ordinary skill in the art would have understood Figure 2 depicts an electrical connection, such that the biometric sensor 240 will transmit an output signal to the application processor 210 . . . a person of ordinary skill in the art would understand that this connection is enabled by flexible PCB 706.” Ex. 1003 ¶ 152.

(8) Limitation [11g] – a portion of the flexible conduit is sandwiched between the seal and the sealing surface of the retainer or between the seal and the surface of the opening.

Considering Petitioner’s annotated version of Kim’s Figure 10b, below, Petitioner argues that “Figure 10(b) discloses a portion of the flexible conduit (*i.e.*, Kim’s ‘flexible PCB 706,’ teal) sandwiched between the seal (*i.e.*, Kim’s ‘sealing rubber 722,’ green) and the surface of the opening (*i.e.*, Kim’s ‘housing 720’ yellow).” Pet. 27–28 (citing Ex. 1003 ¶ 157).



Kim’s Figure 10(b), as annotated by Petitioner, illustrates in cross section a portion of Kim’s flexible PCB as layered between the device housing

(highlighted yellow) and seal (highlighted green). *Compare* Ex. 1004, Fig. 10(b) *with* Ex. 1001, Fig. 3D.

b) Patent Owner's Arguments

Patent Owner does not argue the merits of the claims and Petitioner's challenges but instead urges us not to institute because "AliveCor's petitioning strategy against the '619 patent is the exact type of parallel petitioning that the Consolidated Trial Practice Guide [] was developed to prevent." Prelim. Resp. 1 (citing CTPG at 59).

We address this issue in detail below, but before that, to complete our merits analysis, we next provide our analysis and conclusion as to certain of Petitioner's challenges and institution of trial.

c) Analysis and Conclusion as to Claim 11

We are persuaded that Petitioner has presented sufficient evidence and rationale showing a reasonable likelihood that a person of ordinary skill in the art would have understood that Kim discloses each limitation of a fingerprint sensing system thereby anticipating the elements of claim 11.

Considering in part Dr. Berger's testimony, at least limitations [11pre]–[11c] appear on this preliminary record to be well-known components, e.g., a housing or enclosure, a button assembly, along with a processor for running software applications and programs for most any type of modern electronic consumer goods such as mobile phones, tablet computers, and smart watches. *See, e.g.*, Ex. 1003 ¶¶ 47, 89–90, 95, 103. For the claimed "input surface" and "fingerprint sensor" of limitations [11c i] and [11c ii] we are persuaded, on this record, by Dr. Berger's un rebutted testimony, that an ordinary skilled artisan "would have been very familiar with biometric scanners," and "that "[b]iometric scanners and in particular finger image scanners are used to identify an individual from their unique

characteristics in order to provide secured access to computer systems, secured areas, electronic communications, and electronic financial transactions.” *Id.* ¶ 40 (quoting Ex. 1009, 1:5–9).

As for limitation [11d], we also find Dr. Berger’s testimony consistent with the prior art, namely Choi, Exhibit 1014 regarding sealing of electronic button assemblies. Dr. Berger explaining that “a person of ordinary skill in the art would also have known that button assemblies in mobile electronic devices should be sealed in order to prevent ingress of potentially damaging moisture and dust.” *Id.* ¶ 48, *see, e.g.*, Ex. 1014 ¶ 4 (Choi describing that an “electronic device may include a seal member disposed therein for a water proof function.”). As for limitations [11e] and [11f], and without evidence to the contrary, it appears that Kim expressly discloses that a flexible conduit or flexible PCB connects the biometric sensor to a processor for communicating a user’s fingerprinter data to the processor for a confirmation process. Ex. 1004, 22:10–12, Fig. 2. And, considering Petitioner’s annotated drawings above with respect to limitation [11g], it appears reasonably evident that Kim discloses a portion of flexible PCB 706 sandwiched between the housing surface, i.e., a surface of the opening, in Kim’s electronic device and sealing rubber 722. *Id.* at 20:14–37, Fig. 10b.

We have considered, and on the record at this point in the proceeding for purposes of institution find persuasive Petitioner’s arguments and evidence as set forth at pages 10–30 of the Petition. Also, currently, Dr. Berger’s testimony is un rebutted. Accordingly, we determine that Petitioner has shown a reasonable likelihood that Kim expressly discloses all the limitations, and thus anticipates and/or renders obvious independent claim 11.

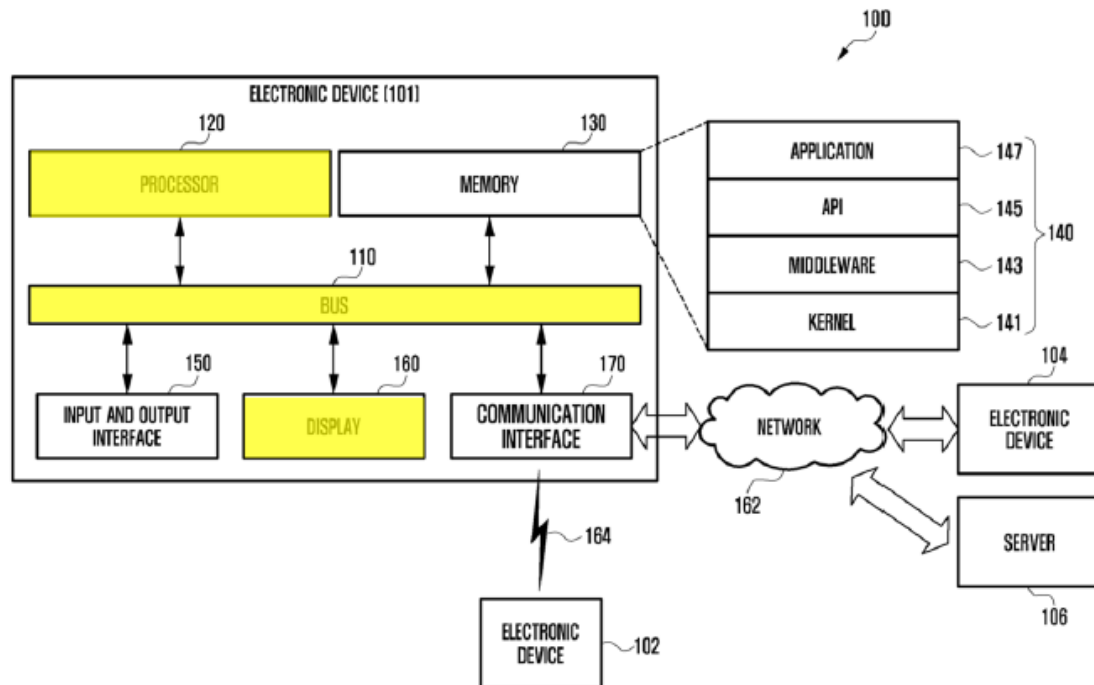
3. *Analysis and Conclusion as to Claims 14, 16, and 19*

Petitioner provides an element-by-element analysis of where each element in challenged claims 14, 16, and 19 is disclosed by or would have been obvious in view of Kim. Pet. 30–38.

We determine on the evidence before us at this early stage that Petitioner has shown that Kim discloses each additional limitation recited in dependent claim 14, as it depends from claim 11 for purposes of anticipation. Additionally, Petitioner has provided articulated reasons and evidentiary underpinnings explaining why it would have been obvious to a person of ordinary skill in the art, for example, that a fingerprint sensor would detect a touch. *Id.* at 30 (citing Ex. 1004, 21:27–41; Ex. 1022 ¶¶ 167–170; Ex. 1003 ¶¶ 162–165).

As for independent claim 16 which recites “a watch” Petitioner incorporates by reference its arguments for similar limitations from its arguments and analysis for claim 11. *Id.* at 30–38. For elements which are different, for example, limitation 16c, “a display positioned within the enclosure and operably coupled to the processor,” Petitioner argues that Kim’s Figure 1, as annotated by Petitioner and reproduced below, expressly illustrates just such a display couple to a processor.

FIG. 1



Petitioner's annotated Figure 1 shows in diagrammatic form display 160, highlighted yellow, connected through bus 110 to processor 120 of electronic device 101. On the arguments and evidence before us at this stage of the proceeding, we find Petitioner's positions persuasive as to each of the limitations of claims 16 and 19 being disclosed by Kim for purposes of anticipation. *Id.* at 30–38.

Accordingly, based on the arguments and evidence on the record before us, we determine, for purposes of this Decision, that Petitioner has established a reasonable likelihood of prevailing on dependent claims 14, 16, and 19, as well as claim 11.

E. Whether Petitioner has Adequately Demonstrated a Need for Parallel Petitions

Petitioner filed two parallel petitions for *inter partes* review of the '619 patent, including IPR2023-00948 mentioned above. Pursuant to our

Trial Practice Guide Petitioner submits a Notice Ranking Petitions that ranks these two petitions as follows:

Rank	Petition	Prior Art Ground	Claims
1	IPR2023-00948	Kim (Anticipation)	1, 5, 9-10
		Kim (Obviousness)	1-10
		Jung in view of Meyers	1, 3-10
		Chang	1-2, 6, 9
2	IPR2023-00949	Kim (Anticipation)	11, 14, 16, 19
		Kim (Obviousness)	11-14, 16-20
		Jung in view of Meyers	11-14, 16-17, 19-20
		Chang	11-17, 19

Pet. Reasons 5.

For the reasons below, we determine that Petitioner has shown sufficient reasons for filing two petitions in this proceeding.

Our Trial Practice Guide explains that, as is the case here, for parallel petitions challenging the same patent “one petition should be sufficient to challenge the claims of a patent in most situations.” CTPG 59. The CTPG also recognizes “that there may be circumstances in which more than one petition may be necessary.” *Id.* The CTPG provides some exemplary reasons for multiple petitions, for instance “when the patent owner has asserted a large number of claims in litigation or when there is a dispute about priority date requiring arguments under multiple prior art references.” *Id.*

The CTPG further compels a petitioner filing multiple petitions to 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 60.

We focus our analysis on part (2) and “why the issues addressed by the differences are material, and why the Board should exercise its discretion to institute additional petitions.” *Id.*

1. Summary of Petitioner's Arguments

Petitioner provides three main reasons why two petitions are reasonable in this case “[f]irst, the claims cannot be addressed in one petition because of the number and length of the claims (which alone include 922 words toward the 14,000 word limit for a single petition) and because of the nature of the claims themselves.” Pet. Reasons 1. Petitioner argues “[s]econd, the petitions are not duplicative and efficiently address the validity of the '619 Patent. Each petition challenges different claims.” *Id.* Petitioner contends also that “the petitions cite essentially the same art against all claims, thus minimizing the burden on the Board from instituting both petitions.” *Id.*

2. Summary of Patent Owner's Arguments

Patent Owner argues that “AliveCor's petitioning strategy against the '619 patent is the exact type of parallel petitioning that the Consolidated Trial Practice Guide (“CTPG”) was developed to prevent.” Prelim. Resp. 1 (citing CTPG at 59). Patent Owner asserts that all the independent claims in the '619 patent, claims 1, 11, and 16 recite the same core features “for example, a ‘button assembly’ with a ‘seal’ and ‘flexible conduit,’ where ‘a

portion of the flexible conduit is sandwiched' between two surfaces.” *Id.* Patent Owner argues it is improper that the different petitions apply the same references Kim, Jung, Meyers, and Chang, and that certain grounds within each petition are redundant. For example, in this proceeding where grounds 1 and 4 both assert anticipation and obviousness for the certain claims. *Id.* at 1–2. According to Patent Owner, the parallel petitions “represent[] a blatant attempt to circumvent the Board’s word count limits on petitioners, which leads to imposition of undue burdens on each of Apple and this Board. *Id.* at 2. Patent Owner argues that denial of institution is warranted here for similar reasons as in *Apple Inc. v. Speir Technologies Ltd.*, IPR2023-00543, Paper 8 at 10 (PTAB Aug. 8, 2023) (Decision Denying Institution of *Inter Partes* Review); and *Fantasia Trading LLC D/B/A Ankerdirectipr v. Cognipower, LLC*, 2021-00070, Paper 21 at 13 (PTAB May 20, 2021) (Decision Denying Institution of *Inter Partes* Review).

3. Analysis

Two things can be true—first, the Board’s word and page count can be necessary to limit Petitioner’s to a reasonable articulation and advancement of the challenges with respect to the claims of a particular patent. 37 C.F.R. § 42.24; *see also* CTPG II.A.3. (“parties should . . . focus on concise, well-organized, easy-to-follow arguments supported by readily identifiable evidence of record.”). Second, as recognized in the CTPG, a single petition, limited in this way, may at times be insufficient to convey all of the necessary information for the Board to correctly consider and evaluate the prior art and claims at issue. *See* CTPG 59 (“there may be circumstances in which more than one petition may be necessary.”). With this in mind, and for the following reasons, we find Petitioner’s explanations and arguments

for two petitions persuasive and, based on the facts and circumstances in this case, institute both parallel petitions.

Petitioner points out that fundamentally, all of claims 1–20 in the ’619 patent are on the table with respect to infringement in the district court litigation. *See* Pet. Reasons 2 (“The Litigation is relatively early in its proceedings, and Patent Owner has not yet identified even a preliminary list of asserted claims, or committed that it will not assert any of claims 11–20 later in the Litigation.”). To the contrary, Patent Owner argues they are asserting only claims 1 and 4 of the ’619 patent and, in any event, “[t]he ’619 patent only includes 20 claims (including three independent claims)—the number covered by the USPTO’s standard filing fee.” Prelim. Resp. 4. It is Patent Owner’s position that “with AliveCor’s approach, multiple petitions would return from exceptional to commonplace, which is directly contrary to the CTPG.” *Id.*

Patent Owner’s Disclosure of Asserted Claims and Infringement Contentions (Ex. 2002), was served in the district court litigation July 25, 2023, more than a month after Petitioner filed the parallel petitions on June 7, 2023. However, at the time of filing the petitions, Patent Owner’s original Complaint asserted only that Petitioner infringed “at least claim 1.” *See* Ex. 1025 (In original Complaint, Patent Owner alleges that “AliveCor directly infringes—literally and/or under the doctrine of equivalents—at least Claim 1 of the ’619 Patent at least by making, using, selling, offering for sale, and/or importing its Accused Products and components thereof in the United States.”). When it prepared and filed its petitions, Petitioner had no way of knowing what claims Patent Owner would assert from an infringement standpoint. And, even in its initial infringement contentions, Patent Owner has reserved the right to amend its Complaint “based on its review of

documents, information, and other materials produced by Defendant AliveCor, Inc. (‘AliveCor’), third parties, and in accordance with the schedule in this case.” Ex. 2002, 2. Given the facts and circumstances in the underlying litigation, in our view, it is not unreasonable for Petitioner to challenge all twenty claims of the ’619 patent.

We acknowledge that twenty claims is, probably, not a “large amount” of claims, as the CTPG exemplifies for purposes of instituting on both petitions. CTPG 59. Yet there are additional factors here which play into our analysis and reasons for not denying institution of one of the petitions. As Petitioner points out, the claims themselves constitute almost 1,000 words. Pet. Reasons 1. Just reproducing the claims and claim limitations alone, as a Petitioner generally must do for purposes of appropriate analysis, accounts for a significant portion of the required 14,000 word count. For another thing, each of the independent claims are different in not just language and scope, but also recite specific alternatives necessitating different analysis. *See* 37 CFR § 42.104 (Our rules require Petitioner to explain “[h]ow the construed claim is unpatentable under the statutory grounds identified in paragraph (b)(2) of this section. The petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.”).

Petitioner provides a claim chart, reproduced below, showing the different language and alternative embodiments and structures covered by the separate independent claims. Pet. Reasons 2.

<u>Claim</u>	<u>Limitation</u>
1	a portion of the flexible conduit is sandwiched between the seal and the sealing surface <u>or between</u> the seal and the enclosure.
11	a portion of the flexible conduit is sandwiched between the seal and the sealing surface of the retainer <u>or between</u> the seal and the surface of the opening.
16	wherein a portion of the flexible conduit is sandwiched between the seal and the button housing <u>or between</u> the seal and the surface of the opening.

Id. Petitioner explains, persuasively, that “[o]f particular relevance here, the limitations above each recite potential **alternative** configurations of the flexible conduit and seal.” *Id.* at 3. And, Petitioner argues, “Patent Owner’s Complaint does not explain which alternative configuration is asserted, nor preclude Patent Owner from changing its mind.” *Id.* (citing Ex. 1025 ¶ 66). According to Petitioner, the vagueness of Patent Owner’s assertions leaves Petitioner unsure as to how Patent Owner construes the scope of certain claim terms and, thus, requires Petitioner to address all possible interpretations in its challenges. *See id.* at 3–4.

Patent Owner has not, in its Preliminary Response, or elsewhere, stipulated that it will limit its infringement contentions to claims 1 and 4. Such a fact or stipulation in the underlying litigation would undoubtedly have an impact on our decision. *See* CTPG, 61 (“If stating that issues are not material or in dispute, the patent owner should clearly proffer any necessary stipulations. For example, the patent owner may seek to avoid additional petitions by proffering a stipulation that certain claim limitations

are not disputed or that certain references qualify as prior art.”). But, the fact remains, that potentially all the claims and specified alternatives recited in the independent claims of the ’619 patent are in play. It is reasonable on the facts in this case for Petitioner to be able to explain and describe in sufficient detail, as required by our rules, where each limitation and alternative in claims 1–20 is disclosed or taught by the prior art. Petitioner must also be allowed to provide evidence and argument as to how or why such limitations would have been obvious and understood with respect to the knowledge and skill of a person of ordinary skill in the art at the time of filing of the ’619 patent.

In addition, Petitioner points out that “certain dependent claims flow from one alternative configuration or the other.” Pet. Reasons 3. While it is not entirely clear that a specifically claimed alternative implicated by a dependent claim matters with respect to word count, the nature of the differing dependent claims in this case arguably necessitates additional analysis. Just by way of example, the “electronic device” recited in claims 1–10 is a different, broader, scope than the “fingerprint sensing system” of independent claim 11, or the “watch” recited in independent claim 16. Ex. 1001, 26:64–28:63. As Petitioner points out, the dependent claims for each independent claim are respectively different in language, structure and scope, and pertain specifically to their respective independent claim. *Id.* Here, Petitioner has also shown that the dependent claims in each set of claims, i.e., 1–10 and 11–20 as they are challenged between the two petitions are sufficiently different that it is reasonable to use two petitions to provide the necessary argument and evidence to support a proper analysis with respect to all the challenged claims.

With respect to the Board cases cited by Patent Owner, in IPR2023-00543 the Board determined that the specific claims challenged in the first and second petition were highly similar and that there was “a high degree of overlap between the grounds in each petition.” *Apple Inc.*, IPR2023-00543, Paper 8 at 10. In the present proceedings, as discussed above, despite the overlap in prior art, Petitioner has persuaded us that there are sufficient differences between the independent and dependent claims challenged between the two proceedings and that Patent Owner has left open the possibility of amending its Complaint to add additional claims from the ’619 patent. Different from the present proceedings, in IPR2021-00070, Petitioner filed four parallel petitions, and the Board found “significant repetition of argument among the various petitions.” *Fantasia Trading LLC*, IPR2021-00070, Paper 21 at 10. In this case we have only two petitions, and again, although the same art is cited against the second set of claims 11–20 in IPR2023-00949, the claims are different enough that we are persuaded to exercise our discretion and permit two parallel petitions.

Finally, Patent Owner argues that the Petition “lack[s] any meaningful discussion of how the prior art differently addresses each “alternative” configuration.” Prelim. Resp. 6 (citing Pet. 3). This is not entirely accurate. For instance, for ground 1 Petitioner argues that for the “between the seal and the surface of the opening” of limitation [11g], on its face Kim’s Figure 10(b) discloses flexible PCB 706 sandwiched between the seal 722 and housing 720. Pet. 27–28. Then, in ground 2, for the alternative “seal and the sealing surface of the retainer” of limitation [11g], Petitioner argues that “to effectively utilize internal space of the mobile terminal . . . a POSITA would have understood the flexible PCB would be routed between the seal

(*i.e.*, the gasket) and the sealing surface.” *Id.* at 38 (citing Ex. 1003 ¶¶ 239–242).

On the facts and evidence in this case we determine that the differences in analysis, scope, and structure between claims 1–20 are sufficiently material to support the filing of two petitions.

III. CONCLUSION

On this record, we are persuaded that Petitioner demonstrates a reasonable likelihood of prevailing on its challenges that Kim anticipates or renders obvious at least claims 11, 14, 16, and 19 of the ’619 patent. That said, Petitioner’s remaining anticipation and obviousness challenges based on Kim, as well as the challenges based on Jung, Meyers, and Chang Allen, are best left for trial after full development of the record. 37 C.F.R. § 42.108(c); *SAS Inst. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (“Equal treatment of claims and grounds for institution purposes has pervasive support in *SAS*.”). We therefore institute trial on all claims and all challenges included in the Petition.

Our factual findings and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. This is not a final decision as to the patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the record as fully developed during trial.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that *inter partes* review of the ’619 patent is hereby instituted as to claims 11–20 on all grounds set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial on the grounds of unpatentability authorized above; the trial commences on the entry date of this decision.

IPR2022-00949
Patent 10,866,619 B1

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