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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

INGENIOSPEC, LLC,
Patent Owner.

Case No. IPR2026-00331
U.S. Patent No. 11,921,355

PATENT OWNER'S PRELIMINARY RESPONSE

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TABLE OF EXHIBITS

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2001	Complaint, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867, Dkt. No. 1 (W.D. Tex. June 5, 2025)
2002	Complaint, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00877, Dkt. No. 1 (W.D. Tex. June 6, 2025)
2003	Order Granting Joint Motion to Consolidate, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867, Dkt. No. 25 (W.D. Tex. Oct. 14, 2025)
2004	Scheduling Order, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867, Dkt. No. 36 (W.D. Tex. Nov. 17, 2025)
2005	Scheduling Order, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867, Dkt. No. 39 (W.D. Tex. Dec. 5, 2025)
2006	Defendant Apple Inc.’s Preliminary Invalidity Contentions, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867 (W.D. Tex. Nov. 21, 2025) (cover pleading)
2007	RESERVED
2008	RESERVED
2009	RESERVED
2010	RESERVED
2011	Defendant’s Proposed Claim Constructions, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867 (W.D. Tex. Dec. 22, 2025)
2012	RESERVED
2013	RESERVED
2014	RESERVED
2015	Declaration of Peter Tong
2016	RESERVED
2017	RESERVED
2018	Defendant’s Reply Claim Construction Brief, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867, Dkt. No. 52 (W.D. Tex. Feb. 18, 2026)
2019	Apple Inc. Form 10-K Annual Report (Oct. 31, 2025)
2020	Claim Construction Order, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867, Dkt. No. 69 (W.D. Tex. Apr. 6, 2026)
2021	Exhibit C-4 to Defendant Apple Inc.’s Preliminary Invalidity Contentions, <i>IngenioSpec, LLC v. Apple Inc.</i> , Case No. 1:25-cv-00867 (W.D. Tex. Nov. 21, 2025)

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Exhibit No.	Description
2022	New Electronics Article (Jan. 8, 2026)
2023	AppleInsider Article (Oct. 25, 2025)
2024	RESERVED
2025	U.S. Patent No. 7,647,120

I. INTRODUCTION

IngenioSpec is a California company that has led innovation in wearable electronic devices for more than a decade. EX2002 ¶¶ 3-4. Its cutting-edge wearable technology seamlessly integrates electronics into the wearable devices to deliver practical solutions that positively transform consumers’ daily lives. *Id.* ¶ 4. Through its patented wearable device technologies, these solutions include health monitoring, hands-free communication, enhanced hearing, and integrated audio and video playback. *Id.* ¶¶ 5, 7-8.

Despite its Petition spanning nine grounds based on a collage of six asserted references to target 92 patent claims, Apple has not met its burden to establish a reasonable likelihood of prevailing on any patent claim. The Petition’s combination of Anderson and Lynch in all grounds and for all challenged claims is meritless, proposing to convert Anderson’s discrete invention into a monstrous edifice on top of a user’s head, making it unsuitable for its intended purpose and changing its principle of operation. Further, across the asserted grounds, the Petition offers no analysis whether, much less how, the asserted art taught the requirement of “at least partially contained within the head-worn personal electronic apparatus” present in nearly half of the challenged claims, and thus fails to meet the threshold showing required by 35 U.S.C. § 314(a) for those claims.

Institution should be denied.

II. OVERVIEW OF THE '355 PATENT

The '355 Patent is titled “Head-worn Personal Audio Apparatus Supporting Enhanced Hearing Support.” EX1001 at 1. The '355 Patent is directed to “wearable electronic devices [that] can, for example, provide audio output, audio enhancements, or event-related audio content.” *Id.* at Abstract, 3:37-47. The '355 Patent describes providing hearing enhancements “for those with mild or medium hearing loss” or even “for those with severe hearing loss.” *Id.* at 6:32-36. The '355 Patent details hearing enhancement functionality as well, such as “frequency-dependent amplification” that “can be calibrated against the user.” *Id.* at 6:37-49. The stylistic features of the '355 Patent inventions “can remove the associated stigma of conventional hearing aids.” *Id.* at 5:60-61; *see also id.* at 84:35-43.

III. LEVEL OF ORDINARY SKILL IN THE ART

For purposes of denying institution and finding that Apple has not met its burden to show a reasonable likelihood of prevailing, IngenioSpec submits that the Board need not determine the level of ordinary skill in the art. *Johnson & Johnson Surgical Vision v. Alcon*, IPR2021-01003, Paper 14 at 9 (P.T.A.B. Nov. 23, 2021) (denying institution: “For our analysis on whether to institute, we need not determine the level of ordinary skill in the art”).

IngenioSpec reserves the right to address the level of ordinary skill in the event the Board institutes trial.

IV. CLAIM CONSTRUCTION IS NOT NECESSARY TO DENY INSTITUTION

Apple asserts in the Petition that “no claim construction is necessary to resolve any issue” in this proceeding. Paper 2 (“Pet.”) at 5. For purposes of denying institution because Apple has not met its burden to show a reasonable likelihood of prevailing, IngenioSpec submits the Board need not construe any terms of the challenged claims. *Realtime Data v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms... that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs. v. Am. Sci. & Eng’g*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

IngenioSpec reserves the right to assert claim construction positions if trial is ordered.

V. THE PETITION’S COMBINATION OF ANDERSON AND LYNCH IN ALL GROUNDS CANNOT PREVAIL

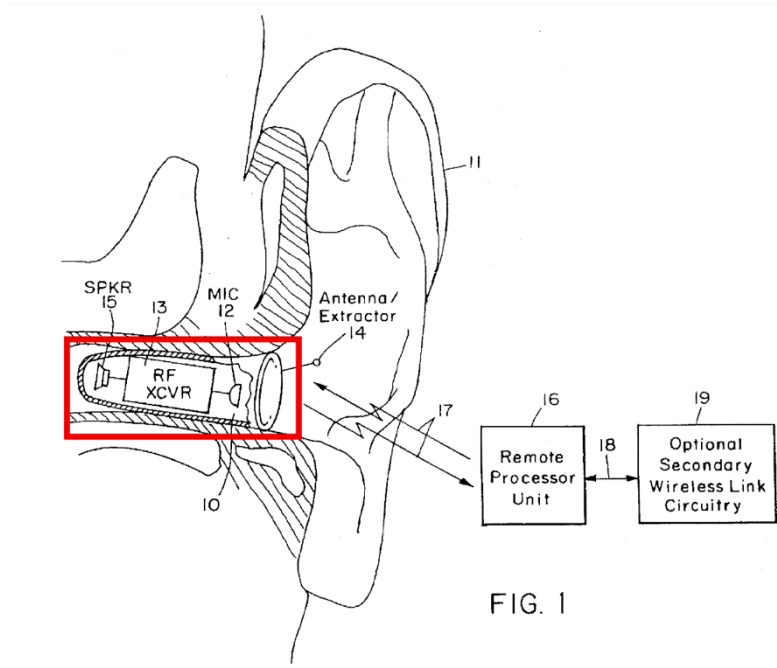
Apple’s proposed modification of Anderson’s discrete, invisible in-ear hearing aid by attaching Lynch’s large, visible ALD Cap on the user’s head in some unexplained fashion solves no problem and indeed defeats Anderson’s main goal of providing an earpiece that “is extremely small, can be hidden from view in the ear canal if desired, and allows complete freedom of movement when a primary two-way link to the RPU is used.” EX1010 at 2:32-35.

A. Anderson’s Primary Embodiments And Lynch Are Not Compatible

To begin with, Lynch’s device would not have been combined with Anderson’s primary embodiments because Lynch’s device is directed to cochlear implants or other implanted devices. Lynch’s add-on ALD Cap provides “an assistive listening device cap (ALD Cap) that is placed on top of a cochlear implant headpiece.” EX1008 at 2:5-7. Alternatively, Lynch’s ALD Cap “may attach to head-mounted technology, such as head-mounted transmitters or microphones used in conjunction with *implantable* hearing aids, cochlear implant processors, or other *implantable* hearing devices that do not use BTE [behind-the-ear] units.” *Id.* at 2:15-19 (emphases added).

Anderson’s primary embodiments with which Apple proposes the combination with Lynch are not implantable devices and thus would not have been combined with Lynch. Anderson described two primary embodiments, neither of which is implantable. First, Anderson described a “Limited-feature embodiment,” which “can be fabricated using low-cost commercial off-the-shelf RF system elements” that uses a headset 21. EX1010 at 4:25-39, Fig. 2. Second, Anderson described a “Full-featured embodiment” with “[d]esirable features.” *Id.* at 6:47-50. Figure 1 “depicts an earpiece 10 that provides the desired CIC [completely-in-the-

canal] form factor.” *Id.* at 6:59-60. As shown below, the earpiece 10 is simply inserted in the ear and is not implanted.



EX1010 at Fig. 1 (annotated). Apple proposes combining Lynch with both Anderson embodiments. *See, e.g.,* Pet. at 18-19 (asserting that one of skill would have combined Anderson’s two primary embodiments to use a headset with all the features of Anderson’s “Full-featured embodiment”). Apple provides no apparent reason to combine Lynch with Anderson, apart from the mischaracterized teachings of Lynch, much less to combine Lynch with both Anderson embodiments simultaneously.

B. Apple’s Justification For Combining Anderson And Lynch Is Baseless

To justify its proposed combination, Apple asserts that “Lynch expressly contemplates use with head-worn hearing aids and emphasizes providing assistive listening functionality without undesirable ear-worn components.” Pet. at 13 (citing EX1008 at 1:61-2:23; EX1003 ¶ 48). As shown above, this assertion is false. Lynch only described using its device with *implantable* devices. See EX1008 at 2:5-23.

In its argument on motivation to combine, Apple does not describe specifically how its proposed combination would work. See *generally* Pet. at 13-14. It instead asserts that “Anderson broadly discloses that the RPU may be ‘carried on’ the user without specifying location, making head mounting an obvious option among a finite set of locations.” Pet. at 13-14 (citing EX1010 at 6:1-3; EX1003 ¶ 48). Apple’s argument that Anderson did not specify a location is easily disproved. See EX1010 at 4:4-7 (“The RPU is typically worn under clothing (e.g., carried in a pocket or purse), but may also be worn in plain sight (e.g., on a belt) if desired.”), 5:59-60 (“The RPU 23 may be hidden from view when carried and operated in a pocket or purse.”), 18:41-42 (“carrying the RPU on a belt near the navel vs. carried in a pocket”), 20:50-52 (“The RPU can be worn as a wristwatch or other inconspicuous piece of jewelry, carried in a pocket or a purse, or worn on a belt over or under clothing.”). Anderson’s extensive and explicit description of where the RPU should

be carried completely undermines Apple’s “finite set of locations” argument, Pet. at 14, because “head mounting” is not one of Anderson’s expressly proposed options for the RPU.

Moreover, Apple’s proposed option of “head mounting” flies in the face of Anderson’s express teachings and one of skill’s desire that the RPU be “hidden from view” or at least “inconspicuous.” EX1010 at 5:59-60, 20:50-52. For example, for the BTE (behind the ear) units mounted on a user’s ear, the art is clear that aesthetics are an important consideration, as they necessarily would be for something mounted on top of a user’s head in plain sight. *See, e.g.*, EX1008 at 1:27-29 (“These BTE units must remain small, light weight, and attractive in order to please the individuals wearing them.”), 1:53-55 (“[T]his assistive hearing unit should not require the user to remove a BTE unit, nor should it detract from the user’s appearance.”). Indeed, mounting the RPU on the head directly defeats the purpose of Anderson’s invention: “The RPU approach allows a simple earpiece design comprising a miniature low-power wireless transceiver, microphone and speaker. ... The resulting earpiece is extremely small, can be hidden from view in the ear canal if desired, and allows complete freedom of movement when a primary two-way wireless link to the RPU is used.” EX1010 at 2:26-35. There is no point in hiding a device in the user’s ear if to accomplish that you mount the bulk of the electronics on top of a user’s head in plain sight. Additionally, if the RPU were mounted on the user’s head, there is no

point in having an RPU at all because all Anderson’s described benefits of separating the bulk of the processing capability “in the RPU rather than the earpiece to take advantage of relaxed size and power constraints,” *id.* at 1:63-65, would be lost.

Apple nevertheless offers a conclusory, unsupported, and unexplained assertion in support of its proposed combination: “Using Lynch’s ALD Cap to mount the RPU would preserve Anderson’s advantages, including wireless operation and ‘complete freedom of movement’ while the hearing aid is worn.” Pet. at 14 (citing EX1010 at 2:32-35; EX1003 ¶ 48). Apple apparently concedes that its proposed combination does not preserve Anderson’s remaining advantages articulated in that passage: “*The resulting earpiece is extremely small, can be hidden from view in the ear canal if desired*, and allows complete freedom of movement when a primary two-way wireless link to the RPU is used.” EX1010 at 2:32-35 (emphasis added). Apple offers no further explanation or support for how a magnetic attachment to a head-mounted RPU could possibly preserve “complete freedom of movement.” See EX1008 at 4:19-21 (“A magnet with increased magnetic strength may need to be placed inside headpiece 310 to permit ALD Cap 300 to adequately adhere to headpiece 310.”). And Dr. Kyriakakis’ declaration simply repeats the assertion without support or explanation. See EX1003 ¶ 48. Apple’s unsupported, conclusory assertion cannot carry its burden to show motivation to combine.

C. Apple’s Proposed Combination Renders Anderson’s Invention Unsuitable For Its Intended Purpose And Changes Its Principle Of Operation

Apple’s proposed combination of Anderson with Lynch would result in a ridiculous conglomeration on a user’s head for use of a hearing aid, something no rational skilled artisan would propose. As discussed above, the asserted art itself teaches the importance of discrete and hidden components. To sum up its proposed combination, Apple asserts that “Anderson’s RPU would be worn on the user’s head—either via Lynch’s ALD Cap mounted on top of headset 21, or (for devices with BTE units) on a cochlear implant headpiece attached to the head.” Pet. at 20. Given that Anderson’s two primary embodiments are not cochlear implants as discussed above, the only proposed option is that the RPU is attached to “Lynch’s ALD Cap mounted on top of headset 21.” *Id.*

Apple helpfully provides a depiction of headset 21 (reproduced at right). *See id.* at 17. The resulting combination thus would



conspicuously place all the processing electronics in plain view on top of a user’s head, which would entirely defeat the purpose of Anderson’s invention rendering it unsuitable for its intended purpose, fundamentally changing its principle of operation, and precluding obviousness. *See, e.g., Alpinestars v. Dainese*, IPR2025-00750, Paper 17 at 3-5 (P.T.A.B. Feb. 9, 2026) (denying rehearing request regarding

denial of institution: “[W]e determined that replacing EP’536’s envelopes with CN’180’s airbag ‘would have made EP’536’s invention unsuitable for its intended purpose: providing a protective garment with “adaptive thermal insulation”” and “would remove the very mechanism by which EP’536 provides ‘adaptive thermal insulation.’”).

Anderson explained the basis for its invention as follows:

It is an object of the present invention to provide a new and useful auditory aid for hearing-impaired persons (i.e., those having certain residual hearing) by removing audio signal enhancement functions from the earpiece and placing them in an RPU. ... The RPU approach allows a simple earpiece design comprising a miniature low-power wireless transceiver, microphone and speaker. ... The resulting earpiece is extremely small, can be hidden from view in the ear canal if desired, and allows complete freedom of movement when a primary two-way wireless link to the RPU is used.

EX1010 at 2:20-35. Apple’s proposed elimination of this ear-worn component, which is the heart of Anderson’s invention, and replacement with a headset with ALD Cap and RPU attached on top defeats Anderson’s intended purpose and changes its principle of operation.

Anderson’s purpose and principle of operation require separating the components to create an “extremely small” earpiece that “can be hidden from view in the ear canal” and that “allows complete freedom of movement.” EX1010 at

2:32-35. Apple’s proposed conglomeration defeats Anderson’s purpose and principle of operation. In Apple’s view, one of skill based on Anderson’s teachings of separating the processing from the earpiece by placing it in the RPU “to take advantage of relaxed size and power constraints” to “eliminate[] the need for most physically large and power-consuming electronics in the earpiece,” EX1010 at 1:63-2:4, would have attached the RPU and an additional ALD Cap to the earpiece (headset 21). Apple cannot possibly carry its burden of proving motivation to combine with such a ridiculous contradiction of Anderson’s teachings.

D. Apple’s Proposed Motivation To Combine Is Irrational

Apple’s assertion that the risk of misplacing Anderson’s RPU would have motivated one of skill to adopt Lynch’s solution of “mounting hearing aid electronics on the user’s head via an ALD Cap, thereby minimizing separation between components and improving comfort, ergonomics, and aesthetics,” Pet. at 13, proposes cutting off a user’s nose to spite its face. First, Anderson taught a solution to the problem. The Petition admits as much. *See id.* (explaining that Anderson “addresses this problem by entering a limited stand-alone mode while the RPU is located”). The Petition nevertheless asserts that Anderson’s “solution is suboptimal because remote processing and communication features are unavailable, and only default parameters are used” while the RPU is located. *Id.* (citing EX1010 at 21:57-62). But the Petition omits the rest of Anderson’s solution:

When communication between the earpiece and RPU resumes, a verbal message generated by the RPU DSP 948 (using, e.g., synthesized or pre-stored digitized speech) is sent to the earpiece to inform the user that system capabilities have been restored. Thus, to locate a misplaced RPU, a user simply wears an earpiece while moving around searching for the RPU. When a message from the RPU is heard in the earpiece, the RPU can be found nearby.

EX1010 at 21:62-22:2. To the extent that this lost RPU default state is “suboptimal” as asserted by Apple, it need only last until the RPU comes back in range as taught by Anderson. Apple’s proposal to address such a minor inconvenience by mounting everything (RPU and magnetically attached ALD Cap) on a headset placed on the user’s head is simply absurd and is unsupported by any teaching in the art.

Second, Lynch’s teaching of the use of an ALD Cap on a user’s head is for *implanted* devices, such as cochlear implants, where head-mounting is the only available option. See EX1008 at 2:5-7, 2:15-19. One of skill would not have undermined all of Anderson’s described benefits to adopt the most conspicuous of all options, head mounting, in a hearing aid system like Anderson’s where head mounting was not necessary.

Lynch taught attaching its ALD Cap to a cochlear implant headpiece. EX1008 at 2:5-7 (“The present invention satisfies the above and other needs by providing an assistive listening device cap (ALD Cap) that is placed on top of a cochlear implant

headpiece.”). The cochlear implant headpiece sits atop the cochlear implant on the head. *See, e.g.*, EX2025 at 5:49-60 (describing the need for cochlear implant headpiece to sit atop the implantable cochlear/vestibular stimulator (ICVS) for proper coil alignment). Neither Lynch nor Apple offers any reason to use such an attachment arrangement for a non-implantable hearing aid, such as Anderson’s.

Apple wrongly asserts that “Lynch’s ALD Cap is designed to integrate with various hearing aids, including head-mounted hearing aids that do not use BTE components—the same type of hearing aid (*e.g.*, featuring headset 21) disclosed in Anderson.” Pet. at 14 (citing EX1008 at 2:15-23; EX1003 ¶ 49). The very passage cited by Apple here states:

Alternately, the ALD Cap of the present invention may attach to head-mounted technology, such as head-mounted transmitters or microphones used in conjunction with *implantable* hearing aids, cochlear implant processors, or other *implantable* hearing devices that do not use BTE units. For hearing aids and cochlear implant processors that are head-mounted and do not use BTE components, the ALD Cap provides access to assistive listening technology without the need for introducing components worn on or in the ear.

EX1008 at 2:15-23 (emphases added). Lynch’s disclosure is expressly limited to implantable hearing aids or cochlear implants in the very passage cited by Apple. Apple’s proposed combination with Anderson’s headset 21 is not taught by Lynch

because headset 21 is not an implantable device. *See* EX1010 at 4:35-39 (describing headset 21 as an off-the-shelf Radio Shack model), Fig. 2 (depicting headset 21 as headphones).

Third, Apple’s proposed combination ignores Anderson’s cochlear implant embodiment further demonstrating its hindsight bias. Apple does not propose applying Lynch, which is limited to implantable devices, to Anderson’s cochlear implant embodiment. *See, e.g.*, EX1010 at 27:25-29:17, Fig. 10. That is, of course, because Anderson’s cochlear implant embodiment would not have provided the features Apple plucked from Anderson without regard to Anderson’s actual teachings.

For example, Anderson explained that “[s]peakers 15 in the left and right earpieces serve no purpose in the cochlear implant application, as the user is profoundly deaf, and may be disconnected to conserve power.” EX1010 at 27:52-55. Anderson’s very reasonable teaching to eliminate speakers for the cochlear implant embodiment would eliminate a limitation of every independent claim and thus of every challenged claim. *See, e.g.*, Claim 1[A] (“at least one speaker”); Claim 17[A] (same); Claim 65[A] (same); Claim 77[A] (same); Claim 87[A] (same); Pet. at 107-136 (claims appendix); *id.* at 20-23 (identifying speaker 15 in CIC earpiece 10 as the claimed “speaker”).

Thus, even had the Petition relied on Anderson’s cochlear implant embodiment (it did not), Apple still could not establish a reasonable likelihood of prevailing. *See, e.g., Lenovo v. IPR Licensing*, IPR2020-01237, Paper 11 at 22, 24-25 (P.T.A.B. Apr. 15, 2021) (denying institution: “Guntin’s first embodiment, cited by Patent Owner, does not render Petitioner’s showing for these limitations sufficient” where “Patent Owner assert[ed] that Petitioner could not rely on this ‘first embodiment’ because it does not satisfy the no-specific-allocation limitation”).

Apple’s failure to propose combining Lynch with Anderson’s cochlear implant embodiment proves that its contentions are hindsight-based and not driven by the teachings in the asserted references.

VI. THE PETITION FAILS TO MEET ITS BURDEN ON AT LEAST ONE LIMITATION IN FORTY-FIVE OF THE CHALLENGED CLAIMS

The Petition does not address at least one limitation in nearly half of the challenged claims in the Petition’s various grounds and thus on its face fails to “specify where each element of the claim is found in the prior art patents or printed publications relied upon,” as required by 37 C.F.R. § 42.104(b)(4). As explained below, the Petition does not address the requirement of “at least partially contained within the head-worn personal electronic apparatus” in 45 of the 92 challenged claims, including independent Claims 65 and 87 and numerous dependent claims.

The Board’s “determination regarding institution” must be “based on what the Petition actually presented and not what it could have reasonably contained had it been reformulated.” *Securus Techs. v. Global Tel*Link Corp.*, IPR2016-00267, Paper 10 at 5 (P.T.A.B. Sept. 12, 2016); *see also In re Magnum Oil Tools Int’l*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (Board is not “free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR”).

Here, because the Petition fails to address at least one limitation required by 45 of the challenged claims, Apple cannot sustain its burden on those claims and institution should be denied. *See, e.g., Unified Patents v. SMTM Techs.*, IPR2019-00434, Paper 6 at 19 (P.T.A.B. July 30, 2019) (no reasonable likelihood of success where “Petitioner entirely fails to address [claim] limitation”); *see also Jiawei Tech. (HK) v. Richmond*, IPR2014-00937, Paper 24 at 5 (P.T.A.B. Feb. 6, 2015) (denying request for rehearing regarding denial of institution: “Petitioner’s complaints about our analysis do not undo Petitioner’s failure to address the claim language in the Petition.”).

A. The Ground 2 Challenges To Claims 3 And 19 Cannot Prevail

The Ground 2 challenges to Claims 3 and 19 cannot prevail because the Petition does not address the limitation “at least partially contained within the head-worn personal electronic apparatus,” much less show that it is satisfied. In particular,

the Petition never addresses the Claims 3[A] and 19[A] requirements of a touch sensitive surface “at least partially contained within the head-worn personal electronic apparatus.” *See* Pet. at 38-39, 41 (cross-referencing Claim 3[A]).

Apple’s failure to address these claim limitations at all cannot be remedied after institution in reply. *See, e.g., Liberty Mutual Ins. v. Progressive Casualty Ins.*, CBM2012-00003, Paper 78 at 67 (P.T.A.B. Feb. 11, 2014) (“[I]f the patent owner response simply states that the petition is lacking because it fails to address a certain claim limitation, then it would be too late to address that limitation, for the first time, in the reply.”); *see also* 37 C.F.R. §§ 42.23(b), 42.104(b)(4); *Ariosa Diagnostics v. Verinata Health*, 805 F.3d 1359, 1367-68 (Fed. Cir. 2015) (“The Board must make judgments about whether a Petition identified the specific evidence relied on in a Reply and when a Reply contention crosses the line from the responsive to the new.”). Nor may the Board “adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR.” *Magnum Oil Tools Int’l*, 829 F.3d at 1381.

Because the Petition simply fails to address at least one limitation for each of Claims 3 and 19 and because that failure cannot be remedied after institution, Apple cannot carry its burden to show invalidity of either claim.

B. The Ground 4 Challenge To Claim 60 Cannot Prevail

The Ground 4 challenge to Claim 60 cannot prevail because the Petition never addresses the Claim 60[B] requirement of a second microphone “at least partially contained within the head-worn personal electronic apparatus.” *See* Pet. at 71. The Petition cross-references Claim 7[B], *see id.*, but the Claim 7[B] discussion does not address this limitation either, *see id.* at 54-55. In fact, the Petition’s discussion of Claim 7[B] points to “an *external* microphone 70,” *id.* at 54 (emphasis added), and the cited passage in Nemirovski explains, “The external microphone 70 is disposed on the housing 30 (FIG. 3) and generally points away from the person wearing the earset 18,” EX1007 at 9:51-53, *cited by* Pet. at 54. Thus, the Petition itself contradicts Apple’s position that the asserted art taught a second microphone “at least partially contained within the head-worn personal electronic apparatus.”

Apple’s Ground 4 challenge to Claim 60 fails.

C. The Ground 5 Challenge To Claim 41 Cannot Prevail

The Ground 5 challenge to Claim 41 cannot prevail because the Petition never addresses the Claim 41[A] requirement of a radiation emitter “at least partially contained within the head-worn personal electronic apparatus,” *see* Pet. at 83, and the Claim 41[B] requirement of a radiation detector “at least partially contained within the head-worn personal electronic apparatus,” *see id.* at 83-84. For both Claims 41[A] and 41[B], the Petition cross-references Claim 13[A]. *See id.* at 83

(Claim 41[A], cross-referencing Claim 13[A]); *id.* at 83-84 (Claim 41[B], cross-referencing Claim 41[A]). However, the Petition’s discussion of Claim 13[A] does not address these limitations either. *See id.* at 78 (Claim 13[A]).

Apple’s Ground 5 challenge to Claim 41 fails.

D. The Ground 6 Challenge To Claim 15 Cannot Prevail

The Ground 6 challenge to Claim 15 cannot prevail because the Petition never addresses the Claim 15[B] requirement of a second microphone “at least partially contained within the head-worn personal electronic apparatus.” *See* Pet. at 88. The Petition cross-references Claim 7[B], *see id.*, but the Claim 7[B] discussion does not address this limitation either, *see id.* at 54-55. In fact, the Petition’s discussion of Claim 7[B] points to “an *external* microphone 70,” *id.* at 54 (emphasis added), and the cited passage in Nemirovski explains, “The external microphone 70 is disposed on the housing 30 (FIG. 3) and generally points away from the person wearing the earset 18,” EX1007 at 9:51-53, *cited by* Pet. at 54. Thus, the Petition itself contradicts Apple’s position that the asserted art taught a second microphone “at least partially contained within the head-worn personal electronic apparatus.”

Apple’s Ground 6 challenge to Claim 15 fails.

E. The Ground 8 Challenge To Claim 64 Cannot Prevail

The Ground 8 challenge to Claim 64 cannot prevail because the Petition never addresses the Claim 64[A] requirement of a radiation sensor “at least partially

contained within the head-worn personal electronic apparatus.” *See* Pet. at 95. The Petition cross-references Claim 13, *see id.*, but the Claim 13 discussion does not address this limitation either, *see id.* at 78-79.

The Ground 8 challenge to Claim 64 also cannot prevail based on Claim 64’s dependence on Claim 60. As explained, the Ground 4 challenge to Claim 60 fails. *Supra* § VI.B. Thus, the challenge to Claim 64 also fails. *Ubiquiti v. Intellectual Ventures*, IPR2024-01290, Paper 9 at 32 (P.T.A.B. Mar. 7, 2025) (“Because each of the dependent claims incorporates the limitations of the independent claim from which it depends, Petitioner has also necessarily failed to demonstrate a reasonable likelihood that these claims are unpatentable over the prior art.”).

Apple’s Ground 8 challenge to Claim 64 fails.

F. The Ground 9 Challenges To Claims 65 And 87 Cannot Prevail

The Ground 9 challenge to Claim 65 cannot prevail because the Petition never addresses the Claim 65[D] requirement of a touch sensitive surface “at least partially contained within the head-worn personal electronic apparatus.” *See* Pet. at 96. The Petition cross-references Claim 3[A], *see id.*, but the Claim 3[A] discussion does not address this limitation either, *see id.* at 38-39.

The Ground 9 challenge to Claim 87 cannot prevail because the Petition never addresses the Claim 87[D] requirement of a user input device “at least partially contained within the head-worn personal electronic apparatus,” *see* Pet. at 100, and

the Claim 87[G] requirement of a second microphone “at least partially contained within the head-worn personal electronic apparatus,” *see id.* For Claim 87[D], the Petition cross-references Claim 3, *see id.*, but the Claim 3 discussion does not address this limitation either, *see id.* at 38-39. For Claim 87[G], the Petition cross-references Claim 15[B], *see id.* at 100, but the Claim 15[B] discussion does not address this limitation either, *see id.* at 88. As explained above in Section VI.D, for Claim 15[B], the Petition cross-references Claim 7[B], but that discussion points to “an *external* microphone 70,” *id.* at 54 (emphasis added), and the cited passage in Nemirovski explains, “The external microphone 70 is disposed on the housing 30 (FIG. 3) and generally points away from the person wearing the earset 18,” EX1007 at 9:51-53, *cited by* Pet. at 54.

Apple’s Ground 9 challenges to Claims 65 and 87 fail.

G. The Challenges To Dependent Claims 4-6, 16, 20-28, 42, 61-63, 66-72, 75-76, 88-92, And 95-100 Cannot Prevail

The challenges to Claims 4-6 fall with the Ground 2 challenge to Claim 3 from which Claims 4-6 depend. As explained, the Ground 2 challenge to Claim 3 fails. *Supra* § VI.A. Thus, the challenges to Claims 4-6 also fail. *Ubiquiti*, IPR2024-01290, Paper 9 at 32 (“Because each of the dependent claims incorporates the limitations of the independent claim from which it depends, Petitioner has also

necessarily failed to demonstrate a reasonable likelihood that these claims are unpatentable over the prior art.”).

The challenges to Claims 20-28 fall with the Ground 2 challenge to Claim 19 from which Claims 20-28 depend. As explained, the Ground 2 challenge to Claim 19 fails. *Supra* § VI.A. Thus, the challenges to Claims 20-28 also fail. *Ubiquiti*, IPR2024-01290, Paper 9 at 32.

The challenges to Claims 61-63 fall with the Ground 4 challenge to Claim 60 from which Claims 61-63 depend. As explained, the Ground 4 challenge to Claim 60 fails. *Supra* § VI.B. Thus, the challenges to Claims 61-63 also fail. *Ubiquiti*, IPR2024-01290, Paper 9 at 32.

The challenge to Claim 42 falls with the Ground 5 challenge to Claim 41 from which Claim 42 depends. As explained, the Ground 5 challenge to Claim 41 fails. *Supra* § VI.C. Thus, the challenge to Claim 42 also fails. *Ubiquiti*, IPR2024-01290, Paper 9 at 32.

The challenge to Claim 16 falls with the Ground 6 challenge to Claim 15 from which Claim 16 depends. As explained, the Ground 6 challenge to Claim 15 fails. *Supra* § VI.D. Thus, the challenge to Claim 16 also fails. *Ubiquiti*, IPR2024-01290, Paper 9 at 32.

The challenges to Claims 66-72 and 75-76 fall with the Ground 9 challenge to Claim 65 from which Claims 62-72 and 75-76 depend. As explained, the

Ground 9 challenge to Claim 65 fails. *Supra* § VI.F. Thus, the challenges to Claims 66-72 and 75-76 also fail. *Ubiquiti*, IPR2024-01290, Paper 9 at 32.

The challenges to Claims 88-92 and 95-100 fall with the Ground 9 challenge to Claim 87 from which Claims 88-92 and 95-100 depend. As explained, the Ground 9 challenge to Claim 87 fails. *Supra* § VI.F. Thus, the challenges to Claims 88-92 and 95-100 also fail. *Ubiquiti*, IPR2024-01290, Paper 9 at 32.

VII. PETITIONER’S VERBATIM EXPERT DECLARATION SUPPORTS DENYING INSTITUTION

The Petition is supported by an expert declaration from Apple’s expert, Dr. Kyriakakis, that essentially “repeats, *verbatim*, the conclusory assertion[s] for which it is offered to support.” *Xerox v. Bytemark*, IPR2022-00624, Paper 9 at 15 (P.T.A.B. Aug. 24, 2022) (precedential) (denying institution). With respect to the Petition’s deficiencies discussed in Sections V-VI above, even if Apple could rely on its expert declaration for arguments not made in the Petition (it cannot), Dr. Kyriakakis largely repeats word for word the text of the Petition and thus fails to remedy any of the deficiencies identified above. *Compare* Pet. at 7-104, with EX1003 ¶¶ 36-406.

Dr. Kyriakakis’ parroting almost verbatim Apple’s Petition, as shown in the illustrative snapshot below, confirms the Petition’s weakness and supports denying institution. *See, e.g., Xerox*, IPR2022-00624, Paper 9 at 15-17 (declining to institute IPR where expert declaration “merely repeats, *verbatim*, the conclusory assertion for

which it is offered to support”); *TikTok v. NTECH Props.*, IPR2024-01339, Paper 9 at 16 (P.T.A.B. Feb. 25, 2025) (“Petitioner fails to establish a reasonable likelihood of” prevailing where its expert “testimony repeats, almost verbatim, the language in the Petition without any further explanation or supporting reasoning or evidence.”).

Pet. at 24-25 Ground 1, Claim 1[D]	Kyriakakis Decl. ¶¶ 70-71 Ground 1, Claim 1[D]
Anderson discloses a hearing test performed by the earpiece and RPU for a user of the hearing aid. (EX1010, 27:4-9; EX1003, ¶70.) The RPU’s DSP 948 generates tones of varying frequencies and amplitudes, which are presented to the user via the earpiece. (EX1010, 27:9-13; EX1003, ¶70.) Based on the user’s response to the tones, the hearing test determines “appropriate gain vs. frequency parameters” for a program stored in the DSP 948. (EX1010, 27:13-17; EX1003, ¶70.) The parameters are used by DSP 948 to “perform[] signal enhancement to compensate for the user’s hearing loss.” (EX1010, 27:13-17; EX1003, ¶70.) This is consistent with the ’355 patent, which describes a “calibration” process that generates a “frequency hearing profile”, so that “amplification across frequencies is tailored to the hearing needs of the user.” (EX1001, 69:20-42; EX1003, ¶70.) The POSITA would have understood Anderson’s gain vs. frequency parameters to be hearing characteristics associated with the user, <i>i.e.</i>, via the hearing test; and that the parameters are stored in the RPU’s electronic circuitry (<i>e.g.</i>, in a memory device of DSP 948) for access by DSP 948, <i>i.e.</i>, for the stored program to perform the signal enhancement. (EX1010, 27:13-17; EX1003, ¶71.)	70. Anderson discloses a hearing test performed by the earpiece and RPU for a user of the hearing aid. (EX1010, 27:4-9.) The RPU’s DSP 948 generates tones of varying frequencies and amplitudes, which are presented to the user via the earpiece. (EX1010, 27:9-13.) Based on the user’s response to the tones, the hearing test determines “appropriate gain vs. frequency parameters” for a program stored in the DSP 948. (EX1010, 27:13-17.) The parameters are then used by DSP 948 to “perform[] signal enhancement to compensate for the user’s hearing loss.” (EX1010, 27:13-17.) This is consistent with the ’355 patent, which describes a “calibration” process that generates a “frequency hearing profile”, so that “amplification across frequencies is tailored to the hearing needs of the user.” (EX1001, 69:20-42.) 71. The POSITA would have understood Anderson’s gain vs. frequency parameters to be hearing characteristics associated with the user, <i>i.e.</i>, via the hearing test; and would further understand the parameters to be stored in the RPU’s electronic circuitry (<i>e.g.</i>, in a memory device of DSP 948) for access by DSP 948, <i>i.e.</i>, for the stored program to perform the signal enhancement. (EX1010, 27:13-17.)

VIII. CONCLUSION

For any of these reasons, the Board should deny institution of the Petition.

Apple Inc. v. IngenioSpec, LLC
U.S. Patent No. 11,921,355 – IPR2026-00331

ARMOND WILSON LLP

Dated: July 7, 2026

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that foregoing **PATENT OWNER'S PRELIMINARY RESPONSE** exclusive of the parts exempted as provided in 37 C.F.R. § 42.24, contains 5,556 words and therefore complies with the type-volume limitations of 37 C.F.R. § 42.24.

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a true copy of the foregoing **PATENT OWNER’S PRELIMINARY RESPONSE** and **EXHIBIT 2025** are being served electronically on July 7, 2026 to the following lead and backup counsel for Petitioner to the following email addresses:

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