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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. IPR2026-00340
U.S. Patent No. 11,644,693

PATENT OWNER'S PRELIMINARY RESPONSE

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TABLE OF EXHIBITS

Exhibit No.	Description
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	RESERVED
2022	RESERVED
2023	RESERVED

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Exhibit No.	Description
2024	Exhibit B-3 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)
2025	U.S. Patent No. 7,647,120
2026	RESERVED
2027	Statutory Disclaimer of Claims 26, 52, and 53 of U.S. Patent No. 11,644,693, filed July 27, 2026

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 second-ranked Petition spanning three grounds based on a collage of five asserted references to target six patent claims, Apple has not met its burden to establish a reasonable likelihood of prevailing on any patent claim. The Petition's proposal to combine Anderson's limited and full-featured embodiments in all grounds and for all challenged claims cannot prevail because it would defeat the expressly stated benefits of Anderson's full-featured embodiment and would make Anderson's full-featured embodiment unsuitable for its intended purpose.

Even if the Petition's proposed combination of Anderson's full-featured and limited embodiments had any merit, and it does not, IngenioSpec has disclaimed

dependent Claims 26, 52, and 53¹, and Apple cannot prevail on Claim 72 or its dependent Claims 73 and 74 for at least two reasons. **First**, the Petition’s combination of Anderson and Lynch in Grounds 2-3 and for Claims 72-74 renders an already meritless combination even more untenable, proposing to convert Anderson’s discrete invention into a monstrous edifice on top of a user’s head, making it further unsuitable for its intended purpose and changing its principle of operation. **Second**, the Grounds 2-3 challenges also fail because the Petition does not show the combination of Anderson in view of Lynch and Nemirovski satisfied Claim 72[D]’s requirement of “determine an ambient noise level.”

Institution should be denied.

II. OVERVIEW OF THE ’693 PATENT

The ’693 Patent is titled “Wearable Audio System Supporting Enhanced Hearing Support.” EX1001 at 1. The ’693 Patent is directed to “wearable electronic devices with electronic components [that] can, for example, provide audio output, audio enhancements, or event-related audio content.” *Id.* at Abstract, 2:66-3:9. The

¹ A copy of IngenioSpec’s statutory disclaimer is submitted as EX2027. Because Claims 26, 52, and 53 have been disclaimed, those claims are no longer subject to an IPR challenge, and Ground 1 is now moot. Challenged Claims 72-74 remain in force.

'693 Patent describes providing hearing enhancements “for those with mild or medium hearing loss” or even “for those with severe hearing loss.” *Id.* at 5:61-65. The '693 Patent details hearing enhancement functionality as well, such as “frequency-dependent amplification” that “can be calibrated against the user.” *Id.* at 5:66-6:11. The stylistic features of the '693 Patent inventions “can remove the associated stigma of conventional hearing aids.” *Id.* at 5:22-23; *see also id.* at 84:10-19.

III. OVERVIEW OF ASSERTED ART

A. Anderson (EX1004)

Anderson is a U.S. patent titled “Hearing Aid with Wireless Remote Processor.” EX1004 at 1. Anderson disclosed at least two different embodiments, including a “limited-feature hearing aid embodiment shown in FIG. 2,” *id.* at 4:26-27, and a “[f]ull-featured embodiment” depicted in Figure 1, *id.* at 6:47, 6:59-60.

B. Lynch (EX1011)

Lynch is a U.S. patent titled “Listening Device Cap.” EX1011 at 1. Lynch described “providing an assistive listening device cap (ALD Cap) that is placed on top of a cochlear implant headpiece.” *Id.* at 2:5-7. As an alternative, Lynch described that its 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.

IV. 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.

V. 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.

VI. THE PETITION’S PROPOSAL TO COMBINE ANDERSON’S EMBODIMENTS IN ALL GROUNDS CANNOT PREVAIL

The Petition’s proposed combination of Anderson’s embodiments cannot prevail because it is baseless and would defeat the expressly stated benefits of Anderson’s full-featured embodiment, making it unsuitable for its intended purpose.

In its discussion of independent Claim 24—from which all challenged claims depend—the Petition with regard to Anderson proposes “combin[ing] headset 21 and its earpiece 22 [depicted in Figure 2] with the full-featured FIG. 1 embodiment.” Pet. at 16. More specifically, the Petition asserts that one of skill in the art “would have been motivated to use the headset” of Anderson’s limited-feature embodiment shown in Figure 2 “instead of the CIC [completely-in-the-canal] housing” of Anderson’s full-featured embodiment shown in Figure 1. *Id.* at 15. This proposed combination solves no problem and 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 wireless link to the RPU is used.” EX1004 at 2:32-35.

Anderson’s principal embodiment is the completely-in-the canal (CIC) embodiment shown in Figure 1. Anderson’s Abstract notes that it offers “an earpiece (10) that can be hidden in the ear canal.” EX1004 at 1. In its allegation pertaining to Claim 24, Apple refuses to accept either Anderson’s full-featured CIC embodiment of Figure 1 or Anderson’s limited-feature headset embodiment of Figure 2 as they are disclosed. Pet. at 13-16. Instead, directed by hindsight, Apple creates its own embodiment from Anderson—one that combines the headset 21 of Anderson’s non-preferred limited-feature embodiment of Figure 2 with Anderson’s preferred full-featured CIC embodiment of Figure 1. *See id.* In effect, Apple attempts to support its allegations against Claim 24 premised not on a disclosed embodiment in Anderson but instead on a newly created embodiment that is not taught or suggested by Anderson.

Apple bears the burden of proving not simply that one of skill *could* have made such a combination but that one of skill in the art *would* have made such a combination. *Belden v. Berk-Tek*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” (emphases in original)). Apple must show why one of skill would have rejected Anderson’s “preferably smaller than the head of a cotton swab” earpiece of its full-featured embodiment (Figure 1) that operates in a

manner that “is desirable due to the availability of low-cost components,” EX1004 at 6:57-59, 7:46-49, to instead use the headset 21 of Anderson’s limited-feature embodiment (Figure 2).

Indeed, in describing the “[d]esirable features” of its full-featured embodiment, Anderson expressly states: “The earpiece is preferably smaller than the head of a cotton swab so as to be hidden from view for the majority of users. FIG. 1 depicts an earpiece 10 that provides the desired CIC form factor.” EX1004 at 6:47-48, 6:57-60. Apple makes no credible showing why one of skill would have combined Anderson’s embodiments in a manner that would defeat the expressly stated benefits of Anderson’s full-featured embodiment as proposed in the Petition. Apple’s failure to do so is fatal to its entire challenge. *See, e.g., SHDS v. TRUINJECT*, IPR2020-00042, Paper 7 at 17 (P.T.A.B. Apr. 14, 2020) (denying institution: “Goldstein states that a benefit of the disclosed breast models is ‘their small size and simplicity which encourage their availability and use.’ Petitioner’s proposed modification, however, would result in a larger, more expensive training apparatus that would defeat Goldstein’s stated benefit. As such, we are not persuaded that one of ordinary skill in the art would have been led to modify Goldstein’s training apparatus in the manner proposed by Petitioner.” (internal citation omitted)); *Catalyst OrthoScience v. Shoulder Innovations*, PGR2024-00042, Paper 17 at 36 (P.T.A.B. Dec. 19, 2024) (“[I]n view of Orphanos’s stated functions

of the snap-fit arrangement, Petitioner does not explain sufficiently... why replacing the snap-fit arrangement with a thread-fit arrangement would have been an obvious design choice to a skilled artisan.”).

The Petition’s purported reasons for its proposed combination fall flat or are refuted by Anderson itself.

First, citing only the verbatim testimony of Dr. Kyriakakis, the Petition merely concludes without analysis that one of skill “would have been motivated to use the headset instead of the CIC housing to realize advantages in cost, simplicity, and commercial availability described by Anderson.” Pet. at 15 (citing EX1003 ¶ 85). But Anderson itself contradicts Apple’s assertion. Anderson explained that “[o]peration of the full-featured preferred embodiment of the invention within [the specified] frequency range is desirable due to the *availability of low-cost components*.” EX1004 at 7:46-49 (emphasis added). Similarly, Anderson described data formats that “lead to a *simple implementation* of the full-featured preferred embodiment.” *Id.* at 17:57-59 (emphasis added).

Despite Anderson’s teachings, the Petition wrongly asserts that “using a larger headset rather than a small in-ear device would make it easier and less expensive to include the processing and communication capabilities of the full-featured application.” Pet. at 16. In support, the Petition cites Anderson at col. 2:36-39 to

assert that “relaxing earpiece size constraints leads to a ‘cost-effective design,’” Pet. at 16, but omits the full context of its mischaracterized language:

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. Processing for all major system capabilities, such as amplification and other forms of signal enhancement, takes place in ***the RPU where size and power constraints are relaxed, leading to a cost-effective design.***

EX1004 at 2:32-39 (emphases added). The full context shows that Anderson’s reference to “cost-effective design” was in regard to the CIC (completely-in-the-canal) design used in Anderson’s full-featured embodiment (Figure 1), which Apple proposes abandoning, *not* Anderson’s limited-feature headset (Figure 2). *Id.* at 6:59-60 (full-featured embodiment of “FIG. 1 depicts an earpiece 10 that provides the desired CIC form factor”). Moreover, Anderson discussed relaxing size constraints for the Remote Processing Unit (RPU), not “relaxing earpiece size constraints” as Apple claims.

The Petition further asserts that “the headset did not need to be customized to fit in a user’s ear canal” and “there would have been comfort benefits.” Pet. at 16. Apple makes no attempt to reconcile these purported benefits with the expressly stated benefits of Anderson’s full-featured embodiment, *see id.*, including the fact that “[t]he earpiece is preferably smaller than the head of a cotton swab so as to be

hidden from view for the majority of users,” EX1004 at 6:57-59, and that the full-featured embodiment aims to “minimize size and power consumption,” *id.* at 10:32-34. On the contrary, Apple’s “proposed modification... would result in a larger... apparatus that would defeat [the reference’s] stated benefit.” *SHDS*, IPR2020-00042, Paper 7 at 17. Further, as to “comfort benefits,” the Petition claims that “many users do not like supporting objects with their ears, a problem addressed by replacing a CIC housing with a headset.” Pet. at 16. The Petition cites Lynch, *see id.* (citing EX1011 at 1:17-21), but Lynch dealt with “behind-the-ear (BTE)” devices and explained that “[t]hese BTE units must remain small, light weight, and attractive in order to please the individuals wearing them,” EX1011 at 1:22-29, which counsels against Apple’s proposal to use an on or over ear type headset such as that shown in Figure 2.

As to the Petition’s concocted problem of “misplacing the device,” Pet. at 16, Anderson expressly taught a solution to that problem, *see, e.g.*, EX1004 at 22:3-10 (“[I]f an earpiece is misplaced, the user manually activates (using, for example, the keyboard 946) a search mode program (i.e., a DSP948 program that indicates on the display 954 that communication has been established with an earpiece) in the RPU and observes the RPU display 954 while moving around searching for the earpiece. In systems with multiple earpieces, a different display 954 indication may be given

for each earpiece.”). Thus, Anderson itself refutes Apple’s concocted problem of “misplacing the device.” *See* Pet. at 16.

Next, the Petition selectively quotes Anderson to assert that “the headset earpiece shown in FIG. 2 is ‘functionally similar’ to the in-ear earpiece 10 of FIG. 1” and that “‘many other earpiece housing types’ can be used in place of the CIC earpiece housing shown in FIG. 1.” Pet. at 15 (citing EX1004 at 3:52-58, 4:15-35). In doing so, the Petition omits key language in Anderson. For example, in noting that “the two earpieces are functionally similar,” Anderson explained that “the earpiece 22 [of headset 21] of FIG. 2 is physically different from the earpiece 10 of FIG. 1.” EX1004 at 4:33-35. Additionally, in stating that “many other earpiece housing types known in the art” can be used, Anderson specifically identified “behind-the-ear, or BTE” as an example but did not identify the headset 21 from its limited-feature embodiment. *Id.* at 3:52-58. Anderson thus offers no suggestion for the combination of Anderson’s intentionally distinct embodiments, as the Petition proposes.

The Petition’s proposed combination also “lack[s] rational underpinning” and would make Anderson’s full-featured embodiment “unsuitable for its intended purpose”: to create an “extremely small” earpiece that “can be hidden from view in the ear canal” and that “allows complete freedom of movement.” EX1004 at 2:32-35; *Alpinestars v. Dainese*, IPR2025-00750, Paper 17 at 3-4 (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.””); *see also WhiteWater West Indus. v. Am. Wave Machs.*, IPR2022-01032, Paper 9 at 19 (P.T.A.B. Nov. 16, 2022) (denying institution: “WhiteWater’s proposed modification lacks rational basis because it... ‘would result in modifications that are contrary to the fundamental principles and mode of operation of Black, and would be undesirable and detrimental to the intended use and enjoyment of the [Black’s] lazy river.’” (alteration in original)).

Because each of remaining challenged Claims 72-74 depend from Claim 24, Apple’s baseless proposed modification is fatal to the entire Petition.

VII. THE PETITION’S COMBINATION OF ANDERSON AND LYNCH IN GROUNDS 2-3 CANNOT PREVAIL

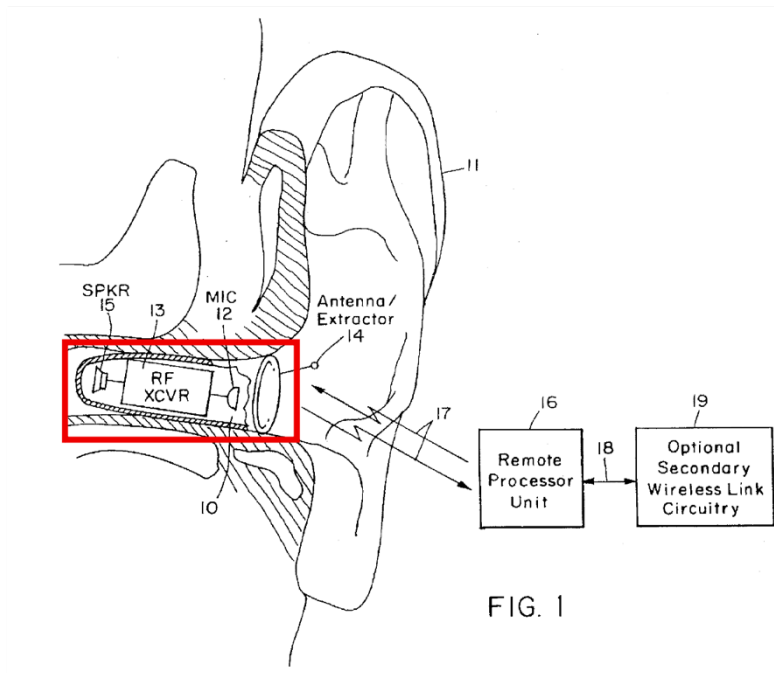
Apple’s proposed modification of Anderson’s discrete, invisible in-ear hearing aid by attaching Lynch’s large, visible ALD Cap on the user’s head in some unexplained fashion solves no problem and indeed defeats Anderson’s main goal of providing an earpiece that “is extremely small, can be hidden from view in the ear canal if desired, and allows complete freedom of movement when a primary two-way wireless link to the RPU is used.” EX1004 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.” EX1011 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. EX1004 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.



EX1004 at Fig. 1 (annotated). Apple proposes combining Lynch with both Anderson embodiments. *See, e.g.,* Pet. at 15-16 (asserting that one of skill would have combined Anderson’s two primary embodiments to use a headset). 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. As discussed above, the combination of Anderson’s embodiments is itself baseless. *Supra* § VI.

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 33 (citing EX1011 at 1:61-2:23; EX1003 ¶ 300). As shown above, this assertion is false. Lynch only described using its device with *implantable* devices. See EX1011 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 32-34. 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 33 (citing EX1004 at 6:1-3; EX1003 ¶ 300). Apple’s argument that Anderson did not specify a location is easily disproved. See EX1004 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 33, 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.” EX1004 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.*, EX1011 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.” EX1004 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 33-34 (citing EX1004 at 2:32-35; EX1003 ¶ 300). 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." EX1004 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 EX1011 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 ¶ 300.

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. The resulting combination 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*, IPR2025-00750, Paper 17 at 3-5 (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.

EX1004 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." EX1004 at 2:32-35. 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," *id.* 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 33, 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 EX1004 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.

EX1004 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 EX1011 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. EX1011 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 34 (citing EX1011 at 2:15-23; EX1003 ¶ 301). 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.

EX1011 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* EX1004 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.*, EX1004 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.” EX1004 at 27:52-55. Anderson’s very reasonable teaching to eliminate speakers for the cochlear implant embodiment would eliminate a limitation of independent Claim 24 and thus of every challenged claim. *See, e.g.*, Claim 24[A] (“at least a pair of speakers”); Pet. at 61-74 (claims appendix); *id.* at 13-16 (asserting that “Anderson’s headset 21 can include a pair of speakers”).

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.

The Grounds 2-3 challenges based on Anderson and Lynch cannot prevail.

**VIII. THE PETITION FAILS TO MEET ITS BURDEN ON CLAIM 72[D]
(GROUND 2-3)**

Apple has not met its burden to show the combination of Anderson in view of Lynch and Nemirovski satisfied Claim 72[D]’s requirement of “determine an ambient noise level.” Pet. at 40.

Board rules “place the burden of production of sufficient arguments and evidence to demonstrate unpatentability on Petitioner.” *MerchSource v. Hyper Ice*, IPR2022-00533, Paper 13 at 29 (P.T.A.B. July 28, 2022) (denying institution) (citing 37 C.F.R. § 42.104(b)(3)-(b)(4); 35 U.S.C. § 312 (a)); *see also* 37 C.F.R. §§ 42.104(b)(3) (requiring a petition to identify “[h]ow the challenged claim is to be construed”), 42.104(b)(4) (requiring a petition to identify “[h]ow the construed claim is unpatentable” and that “[t]he petition... specif[ies] where each element of the claim is found in the prior art patents or printed publications relied upon”).

Here, Claim 72[D] recites “wherein the processing unit is configured to: determine an ambient noise level based on at least the ambient noise.” Pet. at 40. Citing the verbatim testimony of its expert, the Petition references “a noise

component N (ambient noise such as from passing vehicles and machinery)” but never addresses the Claim 72[D] requirement of “determine an *ambient noise level* based on at least the ambient noise.” Pet. at 40 (emphasis added). Indeed, the claimed “ambient noise level” and “ambient noise” are distinct claim terms. *See id.*; *CAE Screenplates v. Heinrich Fiedler*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”).

The Petition’s mere reference to “a noise component N” and the verbatim testimony of Dr. Kyriakakis is insufficient to meet Apple’s burden to show the cited art taught “determine an ambient noise level.” Pet. at 40; *MerchSource*, IPR2022-00533, Paper 13 at 29 (“Without any analysis as to how Jingwen’s structure satisfies the ‘coupled to’ language of the ‘reciprocation assembly’ limitation of claim 1, or a proposed construction for the claim term, explaining what the scope of the ‘coupled to’ language is, even under the plain and ordinary meaning, we are left to speculate Petitioner’s position as to how to construe the claim and how the teachings of Jingwen satisfy that construction.”); *Xerox v. Bytemark*, IPR2022-00624, Paper 9 at 16 (P.T.A.B. Aug. 24, 2022) (precedential) (denying institution) (“[V]erbatim restatement of the assertion being supported, without any supporting evidence or technical reasoning” is insufficient to “supply a limitation missing from the prior art.”).

Because the Petition fails to show Claim 72[D] is met, the Ground 2 challenge to Claim 72 and the Ground 3 challenges to Claims 73-74 cannot prevail.

IX. 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*, IPR2022-00624, Paper 9 at 15. With respect to the Petition’s deficiencies discussed in Sections VI-VIII 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 identified deficiencies. *Compare* Pet. at 10-12, 22-28, 37-44, 48-53, with EX1003 ¶¶ 221-241, 337-355.

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 20-21 Ground 1, Claim 24[E]	Kyriakakis Decl. ¶ 90 Ground 1, Claim 24[E]
In Anderson, enhanced audio signals are “transmitted from the RPU 16 over the primary wireless link 17 to the earpiece 10, where they are converted by a speaker 15 to sounds that can only be heard by the user 11.” (EX1004, 23:8-14; EX1003, ¶90.) Similarly, for two-earpiece (stereo) embodiments, the audio signals are “transmitted from the RPU to the left and right earpiece speakers” for presentation to the user. (EX1004, 4:30-33, 24:10-14; EX1015, 46; EX1003, ¶90.)	90. In Anderson, enhanced audio signals are “transmitted from the RPU 16 over the primary wireless link 17 to the earpiece 10, where they are converted by a speaker 15 to sounds that can only be heard by the user 11.” (EX1004, 23:8-14.) Similarly, for two-earpiece (stereo) embodiments, the audio signals are “transmitted from the RPU to the left and right earpiece speakers” for presentation to the user. (EX1004, 4:30-33, 24:10-14; EX1015, 46.)

X. CONCLUSION

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

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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 5,782 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 **EXHIBITS 2025** and **2027** is being served electronically on July 30, 2026 to the following lead and backup counsel for Petitioner to the following email addresses:

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