

Paper No. _____
Filed: November 12, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, SERVICES LLC,
Petitioner,

v.

VB ASSETS, LLC,
Patent Owner.

Case No. IPR2025-01365
Patent No. 10,297,249

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

The Director should deny institution of *inter partes* review of U.S. Patent No. 10,297,249 (“the ’249 patent”) because Petitioner Amazon.com Services LLC fails to demonstrate a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable. 35 U.S.C. §324(a).

The petition challenges the claims of the ’249 patent based on four grounds, all of which rely on the Ground 1 combination of references with regard to the independent claims. Ground 1 challenges independent claims 1 and 16 based on a proposed combination of Kennewick (EX1004), Oviatt (EX1005), and Fujimoto (EX1008). However, Ground 1 is deficient for several reasons. For example, while the petition contends that Oviatt qualifies as printed publication prior art, the face of the reference contains objective markers indicating that it was not publicly accessible until well after the 2006 priority date of the ’249 patent. While the petition generally cites to a declaration as allegedly demonstrating that Oviatt was publicly accessible prior to the ’249 patent’s priority date, Petitioner fails to acknowledge Oviatt’s own indications of public accessibility that contradict the petition’s assertions. Petitioner fails to explain how its general reliance on a declaration, which addresses a different document, overcomes this contrary evidence. By failing to acknowledge this aspect of Oviatt, the petition fails to meet its requirement to identify with particularity evidence sufficient to establish a

reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent.

The petition also fails to establish that the relied-upon references teach each and every limitation of the independent claims. For example, in alleging that Fujimoto discloses *filtering, by the computer system, sound from the first voice input and the second voice input based on the comparison*, as recited in limitation [1.d],¹ the petition fails to acknowledge that Petitioner has alleged that the same limitation is indefinite in the parallel district court proceeding and, thus, its scope cannot be ascertained. Despite taking this position, the petition nevertheless requests the Board to apply the plain and ordinary meaning to its terms. But the petition makes no attempt to explain how the Board can assess obviousness of the claimed invention—by comparing claim scope to the cited prior art disclosure—in view of Petitioner’s belief that the claims’ scope is indefinite. Even setting aside its failure to provide an adequate claim construction analysis, the petition fails to establish that Fujimoto discloses the limitation. Not only is Fujimoto’s disclosure

¹ Claim language is italicized throughout this preliminary response. Moreover, for convenience, Patent Owner adopts the petition’s labeling for the claim limitations.

at odds with the petition's assertions, it is also at odds with the testimony of Petitioner's own expert.

The petition's remaining grounds, which challenge certain dependent claims, fare no better. The grounds are replete with attempts to gap-fill the prior art to satisfy express limitations of the claims, relying on conclusory statements of what would have been obvious to a POSITA without supporting evidence.

Accordingly, for the reasons detailed below, the Director should deny institution of the petition.

II. CLAIM CONSTRUCTION

In an IPR, claims are given their ordinary and customary meaning in light of the specification. 37 C.F.R. §42.100(b). The petition purports to “appl[y] plain-and-ordinary meaning to all terms.” Pet., 8. However, while Patent Owner submits that no constructions are necessary to deny institution, in the parallel district court proceeding, Petitioner has proffered explicit constructions for terms recited in the challenged claims of the '249 patent. As explained below, Petitioner fails to acknowledge these different constructions, nor does Petitioner provide any explanation as to how these constructions are consistent with its application of plain and ordinary meaning in the petition. This failure renders the petition deficient for failing to set forth “[h]ow the challenged claim is to be construed.” 37 C.F.R. §42.104(b)(3); *see also Revvo Techs., Inc. v. Cerebrum Sensor Techs.*,

Inc., IPR2025-00632, Paper 20 at 2, 3-4 (Director Nov. 3, 2025) (precedential) (vacating decision granting institution in view of petitioner’s differing claim constructions before the Board and the district court).

Prior to the filing of this petition, Petitioner advanced several constructions for terms recited in the challenged claims. *See generally* EX2008. For example, Petitioner has proffered constructions for the terms *context* and *voice input*, recited in each of the independent claims. *Id.*, 1. Petitioner also explicitly construes *a manner in which the natural language utterance was spoken*, as recited in dependent claims 10 and 24. *Id.* The petition does not mention these constructions or purport to apply them in the obviousness analysis.

Moreover, with respect to the limitations *compar[ing/e] the first voice input with the second voice input* and *filter[ing] sound from the first voice input and the second voice input based on the comparison*, recited in each of the independent claims, Petitioner has contended that these limitations are indefinite. EX2008, 1; *cf. Facebook, Inc. v. Sound View Innovations, LLC*, IPR2017-00998, Paper 13 at 17-18 (PTAB Sept. 5, 2017) (noting petitioner’s failure to inform Board “that it was simultaneously arguing a different treatment of the terms of [the challenged claim] before the district court” as reason for denial). Petitioner’s district court assertion that the limitations are indefinite “is a statement that the proper claim scope cannot be ascertained, which is inconsistent with Petitioner’s assertion that

[the Board] should make an unpatentability determination.” *Monolithic Power Sys., Inc. v. Volterra Semiconductor LLC*, IPR2020-01370, Paper 18 at 15-16 (PTAB Mar. 4, 2021). Because the petition fails to provide any explanation as to how the Board could address the limitations consistently with Petitioner’s indefiniteness arguments, the petition should be found deficient for failing to specifically identify how the challenged claims are to be construed.² *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00340, Paper 18 at 3-4 (Director Nov. 5, 2025) (informative) (finding inability to argue indefiniteness in an IPR is insufficient to show why different claim construction positions are warranted).

² In its opposition to Patent Owner’s request for discretionary denial Petitioner confirms that it “*adopts* PO’s plain meaning constructions for the term that Petitioner proposes is indefinite in the litigation.” Paper 7, 8 (emphasis original). While Petitioner cites to a 2022 Board decision in contending that “it is neither uncommon nor impermissible” to advance different claim constructions (*id.*), recent Director precedent dictates otherwise. *Revvo Techs.*, Paper 20 at 5 (“Simply noting that the petitioner is adopting a patent owner’s claim construction proposals from district court, however, is not a sufficient reason for advancing different positions in the two forums.”).

III. GROUND 1: THE PETITION FAILS TO ESTABLISH THAT CLAIMS 1, 6, 9, 12-16, 21, AND 25-28 ARE OBVIOUS OVER KENNEWICK, OVIATT, AND FUJIMOTO

Ground 1 of the petition challenges claims 1, 6, 9, 12-16, 21, and 25-28 as obvious based on Kennewick, Oviatt, and Fujimoto. Pet., 3. As detailed below, the petition fails to establish that the challenged claims are rendered obvious over the applied references for several reasons. First, the petition provides insufficient evidence that Oviatt (EX1005) was publicly accessible prior to the '249 patent's priority date. Second, the petition fails to show that the proposed combination of Kennewick, Oviatt, and Fujimoto teaches each and every limitation of the challenged claims, including limitations [1.a]-[1.b], [1.d], and [1.f]. Third, the petition fails to provide a sufficient rationale to combine Kennewick, Oviatt, and Fujimoto.

A. The Petition Fails to Establish that Oviatt Qualifies as Prior Art

The petition's Ground 1 relies, in part, on Oviatt (EX1005) as allegedly rendering the challenged claims obvious. According to the petition, "Oviatt is a printed publication" that "was published in the journal *Human-Computer Interaction* in 2000" and "was publicly accessible before the priority date of the '249 patent." Pet., 4. The petition fails to establish that Oviatt qualifies as prior art because the petition's evidence of public accessibility is insufficient. As explained below, the relied-upon reference bears indicators that it was made

publicly accessible well after the priority date of the '249 patent and the petition's reliance on "[t]he declaration of Rachel J. Watters (EX1006)" as allegedly demonstrating Oviatt's public accessibility fails to satisfy Petitioner's burden in establishing Oviatt qualifies as prior art.

"[T]he burden is on the petitioner to identify with particularity evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent, and therefore that there is a reasonable likelihood that it qualifies as a printed publication." *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 16 (PTAB Dec. 20, 2019) (precedential); *see also Jazz Pharms., Inc. v. Amneal Pharms., LLC*, 895 F.3d 1347, 1356 (Fed. Cir. 2018) (IPR petitioners have "the burden to prove that a particular reference is a printed publication").

First and foremost, the petition fails to meet its burden in identifying, with particularity, that Oviatt qualifies as prior art because the reference relied upon in the petition's grounds only indicates public accessibility after the '249 patent's priority date. *See* Pet., 2 (treating October 16, 2006, as the priority date). Specifically, the front page of Oviatt bears markings stating that it was "[p]ublished online" on "09 Dec 2009" and "downloaded by" Boston University on "27 September 2014." EX1005, 1. Thus, the reference that the petition applies

as prior art to the challenged claims facially contradicts the petition's public accessibility claim. Pet., 4.

In addition, the only evidence provided by the petition to establish Oviatt's public accessibility is a general assertion that "[t]he declaration of Rachel J. Watters (EX1006) demonstrates that Oviatt was publicly accessible before the priority date of the '249 patent." *Id.* However, the Watters declaration fails to demonstrate that the Oviatt grounds reference was publicly accessible priority to October 2006 because the declaration addresses accessibility of a different document, and the petition fails to establish that the Watters testimony applies to the reference relied upon in the petition grounds. Moreover, even if it were assumed that the testimony extended to the applied Oviatt reference, the declaration provides insufficient evidence of public accessibility.

In particular, the Watters declaration submits an "Exhibit A," which the declaration asserts is "a true and accurate copy of the front matter and page 263 with library date stamp of *Human-Computer Interaction* (2000), from the University of Wisconsin-Madison Library collection," along with "an excerpt of pages 263 to 322 of that issue, showing the article entitled *Designing the user interface for multimodal speech and pen-based gesture applications: state-of-the-art systems and future research directions* (2000)." EX1006, 2. The date stamp provided on this exhibit indicates a date of April 25, 2001, which, according to the

Watters declaration, means Exhibit A was “catalogued and available to library patrons within a few days or at most 2 to 3 weeks after April 25, 2001.” *Id.*

However, the petition does not purport that the Exhibit A is the same Oviatt that the petition relies on for its grounds. *See* Pet., 4. Similarly, the Watters declaration only opines on the public accessibility of Exhibit A and makes no contentions that the same conclusions drawn with regard to Exhibit A apply to EX1005. *See* EX1006, 1-3. In fact, the Watters declaration does not mention EX1005 at all. Thus, even assuming the declaration’s assertions regarding the public accessibility of Exhibit A are true, the petition’s reliance on the Watters declaration is insufficient to establish that Oviatt was publicly accessible prior to the ’249 patent’s priority date, especially in view of the reference’s own indicators showing otherwise. *Cf.* 37 C.F.R. §42.22(a)(2) (requiring petition to provide “a detailed explanation of the significance of the evidence”).

In addition, the declaration provides insufficient evidence to establish that even Exhibit A was publicly accessible prior to the ’249 patent’s priority date. The only basis to support the accessibility of Exhibit A is a library stamp that, at best, indicates when it was received at the library. EX1006, 2. No extrinsic evidence is provided that Exhibit A was shelved in a manner such that it could be located by those interested in the art and the declaration provides only general assertions regarding “[s]tandard operating procedures” for materials received at the library.

Id., 1-2; *cf. Qualcomm, Inc. v. ParkerVision, Inc.*, IPR2015-01825, Paper 8 at 19 (PTAB Mar. 8, 2016) (noting declarant’s failure to establish that assertions regarding the “normal practice” of library applied to the relevant timeframe). The declaration also generally asserts that members of the public “could locate” the publication “by searching the public library catalog or requesting a search through WTS,” but provides no other evidence establishing that those interested in the art would have even been aware of the publication. EX1006, 2-3; *cf. First Solar, Inc. v. Rovshan Sade*, IPR2023-00881, Paper 13 at 18-19 (PTAB Nov. 16, 2023) (noting lack of “testimonial evidence that a person interested in solar trackers or solar panel assemblies would be independently aware of the web address for Wattsun or even of the company or its products”).

Accordingly, for these reasons, the petition fails to establish that Oviatt qualifies as prior art.

B. The Petition Fails to Establish the Combination of Kennewick, Oviatt, and Fujimoto Teaches Each and Every Limitation of Independent Claim 1

1. The petition fails to show that the combination of Kennewick, Oviatt, and Fujimoto teaches limitations [1.a]-[1.b]

Limitation [1.a] recites *receiving, by the computer system during a first conversation, a first voice input via a first input device, the first voice input comprising a first natural language utterance*. Limitation [1.b] further recites

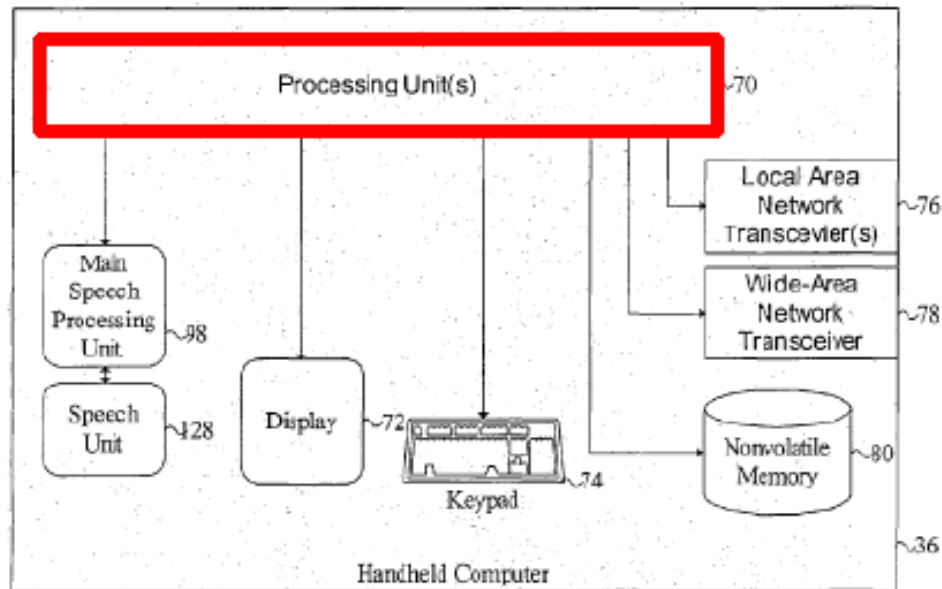
receiving, by the computer system, a second voice input comprising the first natural language utterance via a second input device. The petition contends that Kennewick discloses these limitations through “a speech unit.” See Pet., 16. The petition particularly relies on an embodiment of a speech processing system illustrated in Figure 5 of Kennewick, which the petition asserts shows “an array microphone that receives voice inputs.” *Id.*, 16. The petition respectively maps first and second microphones of the array to the *first input device* and *second input device* that receive *a first voice input* and *a second voice input*. Pet., 16, 18. The petition’s mapping, however, is inconsistent with what the petition identifies as the *one or more physical processors* that perform the claimed method.

Specifically, the preamble of claim 1 recites a *computer-implemented method* that is *implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method*. Each of the subsequently recited method steps are thus performed by the *one or more physical processors* of the preamble.³ This includes the *receiving* steps of limitations [1.a] and [1b].

³ In the related district court litigation, Amazon contends the preamble is limiting. EX2008, 1.

In asserting that “Kennewick’s method is ‘***computer-implemented...by a computer system,***’” Petitioner relies on Kennewick’s “fixed computer” and “handheld computer” embodiments of Figs. 3 and 4, both of which integrate speech unit 128 into the same computer as main speech processing unit 98. Pet., 10-11 (citing EX1004, ¶107); EX1004, ¶107 (speech unit is “embedded in one or more of the ... handheld computers 36 and fixed computer systems 44.”), Figs. 3, 4. Discussing Figures 3 and 4 of Kennewick, Petitioner asserts that “[t]hese embodiments of the computer are each a ‘computer system’ because they are formed of various computing components working together.” Pet., 11.

Having identified the fixed and handheld computer systems of Figures 3 and 4, respectively, as mapping to the claimed computer system, Petitioner then identifies the “processing unit(s)” of these handheld and fixed computers as the claimed *one or more physical processors*:



Pet., 11 (citing annotated version of EX1004, Figure 3). In the words of Petitioner, “Figure 3, shown above, illustrates that the computer system has ‘processing units’ Kennewick’s computer system thus **‘includes one or more physical processors.’**” Pet., 11. The petition does not identify any other alleged processor in this discussion. *Id.*

However, when addressing limitations [1.a] and [1.b], Petitioner cites a different embodiment of Kennewick, turning to Figure 5. Pet. 16-18. Petitioner relies on speech unit 128 from Figure 5 as satisfying the *receiving* steps. *Id.*, 16 (“The speech unit includes an array microphone that receives voice inputs. ... A first microphone of the array is a **‘first input device’** and **‘receives a voice input from a user.’**”), 18 (“A second microphone of the array is a **‘second input device’** because it is a second device that receives a voice input from a user.”). As

highlighted by the petition’s annotated version of Figure 5, speech unit 128 is physically separate from main unit 98 where the majority of Kennewick’s speech interpretation and other processing takes place:

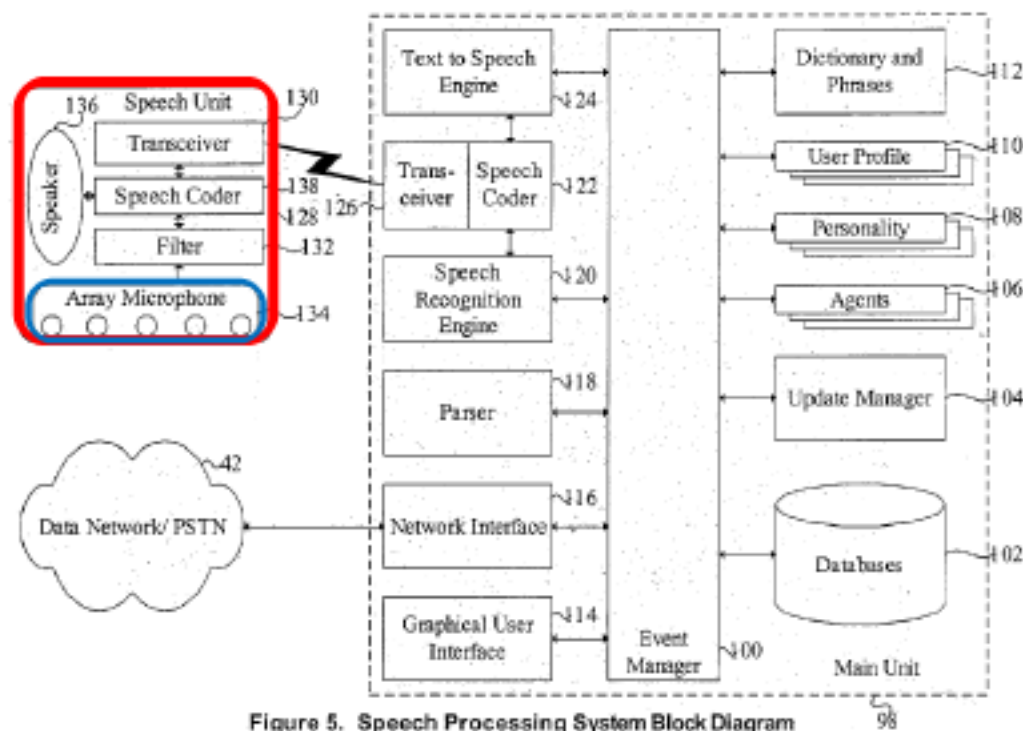


Figure 5. Speech Processing System Block Diagram

Pet., 16. Confirming that Figure 5’s speech unit 128 and main unit 98 are distinct, Kennewick explains that “a transceiver module 130 transmits the coded speech to the main unit 98.” EX1004, ¶121.

In its limitation [1.a] and [1.b] discussions, Petitioner does not provide discussion of what *processor* it asserts performs the *receiving* step in Kennewick. Pet., 16-18. Nor does Petitioner allege that Kennewick’s “processor unit(s)” cited earlier in the petition would perform the recited *receiving* step. *Id.* The petition is

simply silent on this aspect of the claims, despite reliance on a separate, **external** speech unit and its disclosed array of microphones when mapping to limitations [1.a] and [1.b]. Petitioner’s mapping creates an inconsistency, given that the Figure 5 speech unit is a separate device that transmits data wirelessly to the main unit where the other speech processing components are located. Pet. 16-17 (citing EX1004, ¶¶107, 121, Fig. 5); EX1004, ¶¶107 (main unit and speech unit can be “independent components”), 121-24, Fig. 5. Conversely, Petitioner also does not rely on the transceiver, speech coder, or any other component in the main unit as performing the claimed *receiving* step, which would have entailed explaining how receipt of encoded wireless transmissions satisfies the requirement that what is received is the *natural language utterance*, as required by the claims. EX1004, ¶121.

Accordingly, the petition fails to establish that the combination of Kennewick, Oviatt, and Fujimoto teaches limitations [1.a]-[1.b].

2. The petition fails to show that the combination of Kennewick, Oviatt, and Fujimoto teaches limitation [1.d]

Limitation [1.d] recites *filtering, by the computer system, sound from the first voice input and the second voice input based on the comparison*. As explained above in §II, Petitioner has asserted in the parallel district court proceeding that limitation [1.d], along with limitation [1.c], is indefinite. The petition’s failure to provide an express claim construction explaining how the prior

art can still read on limitations that Petitioner believes have unascertainable scope renders the petition facially deficient. In addition to this deficiency, the petition's analysis with respect to limitation [1.d] fails for other, independent reasons. For example, the petition does not assert that Kennewick alone discloses limitation [1.d] but rather contends that "Kennewick in combination with Fujimoto discloses limitation [1.d]" because Fujimoto allegedly "discloses '***filtering...sound from the first voice input data and the second voice input based on the comparison.***'"

Pet., 22. However, as explained below, the petition's discussion for this limitation fails to identify disclosure of filtering sound from the extracted voice data relied upon as the *second voice input*.

First, the petition fails to show that Fujimoto discloses *filtering ... sound from the first voice input and the second voice input* because it is at odds with Fujimoto's disclosure and Petitioner's expert testimony. The petition asserts that Fujimoto's "cross correlation determiner 'outputs the main voice data and the extracted reference voice data.'" Pet., 22. The petition maps the outputted main voice data to the claimed *sound from the first voice input* and the extracted reference voice data output to the *second voice input*. *Id.* The petition goes on to cite Fujimoto's disclosure that the output from the cross correlation determiner is sent to "noise canceling unit 304, which then 'corrects the main voice data and removes noise.'" *Id.* (citing EX1008, ¶¶63-64). Petitioner characterizes this

disclosure as mapping to the claimed filtering, asserting that “Fujimoto’s noise canceling unit 304, which receives two signals (the main voice data and the extracted reference voice data) and outputs a signal that ‘corrects the main voice data and removes noise,’ is ‘filtering’ the input signals by removing noise (i.e., by eliminating or minimizing noise).” *Id.*

However, Fujimoto does not describe the filtering Petitioner contends. Instead, the relied-upon portions of Fujimoto only discuss correcting **the main voice data** to remove noise. EX1008, ¶64; *see also id.*, ¶¶84 (“The noise canceling unit 304 then corrects the main voice data so that the difference between the main voice data and the extracted reference voice data is reduced.”), 122 (stating same). Further evidencing that Fujimoto’s noise canceling 304 only corrects the main voice data is Fujimoto’s description that, after performing this correction process, only the main voice data is recorded in memory. *Id.*, ¶65 (“This noise-canceling voice data memory 306 records the main voice data after noise-canceling processing has been applied to the main voice signals by the noise-canceling unit 304.”). Thus, the petition’s citations to Fujimoto only show, at best, that Fujimoto discloses filtering sound from the main voice data (the alleged *first voice input*). The petition provides no evidence showing that Fujimoto also discloses filtering sound from the extracted reference voice data (the alleged *second voice input*).

In fact, Fujimoto’s failure to provide such disclosure is recognized by Petitioner’s expert, who advances a completely different theory as to how the references teach the limitation. Specifically, Petitioner’s expert admits that “Fujimoto does not provide details of how [its] noise-removal process happens.” EX1002, ¶120. Petitioner’s expert then goes on to argue that “a POSITA **would have found it obvious** for Fujimoto’s noise canceling unit to implement a filter averaging the two input signals (the main voice data and the extracted reference voice data) since it would have been well-known to a POSITA that averaging signals from multiple microphones is a way to reduce noise.” *Id.*, ¶122 (emphasis added) (citing EX1011, 531-532). In other words, Petitioner’s expert concedes that Fujimoto lacks disclosure of filtering sound from the main voice data and the extracted reference voice data and instead proposes an implementation of Fujimoto that incorporates a specific type of filter. No such modification of Fujimoto is proposed in the petition. Pet., 22-23. Thus, the petition’s assertion that Fujimoto discloses *filtering ... sound from the first voice input and the second voice input* is contrary to not only Fujimoto itself but also to Petitioner’s own expert testimony.

Accordingly, the petition fails to establish that the combination of Kennewick, Oviatt, and Fujimoto teaches limitation [1.d].

3. The petition fails to show that the combination of Kennewick, Oviatt, and Fujimoto teaches limitation [1.f]

Limitation [1.f] recites *generating, by the computer system, the short-term knowledge based on at least the first voice input and the first non-voice input*. The petition contends that “Kennewick combined with Oviatt discloses limitation [1.f].” Pet., 28. In particular, the petition does not contend that Kennewick discloses generating short-term knowledge based on both voice input and non-voice input. *Id.*, 28-29. Instead, the petition alleges that Oviatt discloses this aspect “because it receives voice and non-voice inputs and generates short-term knowledge based on these inputs.” *Id.*, 29. However, the petition fails to show that Oviatt “generates short-term knowledge” based on both voice and non-voice inputs.

In asserting that Oviatt discloses the specific type of short-term knowledge recited in the claim, the petition relies on Oviatt’s Portable Voice Assistant (“PVA”) that ““can interpret simultaneous pen-voice input [events]...and integrates them to form a frame-based description of the user’s request.”” *Id.* (quoting EX1005, 39) (original alterations). The petition contends that “[t]hese events and the description” amount to *short-term knowledge* based on voice and non-voice inputs “because they include a history of the user’s voice and non-voice inputs with the PVA built as the user’s conversation progresses.” *Id.*

The cited portion of Oviatt does not support the petition’s contention that Oviatt builds a history of voice and non-voice inputs. Oviatt describes that “[t]o ensure proper synchronization,” the PVA “time stamps both speech and pen input events and integrates them to form a frame-based description of the user’s request.” EX1005, 39. Oviatt explains the pen input events “are stored in a time-sorted buffer where they can be retrieved by the integrator thread,” which would, for example, “look for a pen event that occurred closest in time to the spoken deictic event ‘that.’” *Id.* Oviatt explains that “[t]his design allows for asynchronous processing of speech and pen-based input, while still processing them as coordinated multimodal pieces.” *Id.* Thus, Oviatt describes storage of pen input events in a buffer to “ensure proper synchronization” of asynchronous events when integrating speech and pen events to form a description of the user’s request. The petition does not explain how this amounts to a “history” that is “built as the user’s conversation progresses” to serve as *short-term knowledge* as contemplated by the ’249 patent. *See* Pet., 29.

Accordingly, the petition fails to establish that the combination of Kennewick, Oviatt, and Fujimoto teaches limitation [1.f].

C. The Petition Fails to Establish a Rationale to Combine Kennewick, Oviatt, and Fujimoto

The petition further fails to sufficiently explain why a POSITA would have been motivated to combine Kennewick, Oviatt, and Fujimoto to arrive at the

claimed invention because it fails to sufficiently address the references' teachings. For example, with regard to limitation [1.c], the petition argues that a POSITA would have been motivated to modify Kennewick with Fujimoto's comparison "to compare the first and second voice inputs as part of a process to reduce noise in order to improve speech recognition." Pet., 20-21. For limitation [1.d], the petition similarly argues that "[a] POSITA would have been motivated to modify Kennewick's computer system to perform Fujimoto's noise canceling in order to reduce noise and improve speech recognition." *Id.*, 23. In both cases, the petition asserts that the combination would be "the application of a known technique ... as taught by Fujimoto to a known device (Kennewick's computer system) ready for improvement." *Id.*, 21, 23.

However, as the petition acknowledges (Pet., 21), Kennewick already describes that "[f]iltering and noise elimination may be a key aspect of the invention" to achieve "the best possible signal to noise ratio." EX1004, ¶146 ("To accomplish the required improvements an array microphone 134 and a filter 132 may be employed."). In this regard, Kennewick describes employing its own filtering techniques. *See, e.g., id.*, ¶¶38 ("Speech received at the microphones may then be processed with analog or digital filters to optimize the bandwidth, cancel echoes, and notch-out narrow band noise sources."), 148 ("The pass band of the

filter can be set to optimize the signal to noise ratio at the input to the speech recognition engine 120.”).

While the petition states that modifying Kennewick to use Fujimoto’s process would “reduce noise and improve speech recognition,” neither the petition nor its expert provides any basis as to why a POSITA would have understood Fujimoto’s process as an improvement to Kennewick’s own process. See Pet., 21, 23; EX1002, ¶¶116-17, 125-26. This is particularly important in light of the different purpose of Fujimoto’s system, which aims “[t]o provide a voice matching device with an increased likelihood of attaining a match,” as opposed to Kennewick’s system for “allowing mobile users to ask natural language speech questions or give natural language commands.” EX1008, Abstract, ¶¶1-8; EX1004, ¶2. The petition provides no evidence or explanation as to why a POSITA would have understood a process used to improve voice matching as an improvement to a natural language system that already implements filtering and noise elimination to achieve the best signal. For these reasons, the petition fails to sufficiently show that a POSITA would have been motivated to combine the references in the manner proposed.

D. The Petition Fails to Show that the Combination of Kennewick, Oviatt, and Fujimoto Renders Obvious Independent Claim 16

Independent claim 16 recites *[a] system for facilitating natural language system responses via short-term knowledge generated based on one or more prior*

multi-model device interactions. The petition argues that “[c]laim 16 is unpatentable for the same reasons as claim 1” and thus incorporates its claim 1 analysis for independent claim 16. Pet., 43. The petition fails to include separate arguments for claim 16; accordingly, for the same reasons discussed above with respect to independent claim 1, the petition also fails to establish that the combination of Kennewick, Oviatt, and Fujimoto renders obvious independent claim 16. *Supra*, §III.B.

Indeed, the petition’s failure to advance separate arguments for claim 16 is additionally problematic with respect to limitation [16.a], which recites that the system includes *one or more physical processors programmed with one or more computer program instructions which, when executed, cause the one or more physical processors to*” perform the recited operations. In this respect, the petition alleges that “[t]he ‘computer system’ implementing the method of claim 1 is equivalent to the ‘system’ of claim 16 and obvious for the same reasons.” Pet., 43. However, as explained above with respect to claim 1, the petition’s mapping of Kennewick’s disclosure to limitations [1.a]-[1.b] is inconsistent with what the petition identifies as the *one or more physical processors*. Thus, the petition’s incorporation of its claim 1 arguments fail to meet the petition’s burden in explaining how the relied-upon processors of Kennewick *receive, during a first conversation, a first voice input via a first input device and receive a second voice*

input ... via a second input device as recited in limitations [16.a.i] and [16.a.ii], respectively. *Cf. Zhuhai CosMX Battery Co., Ltd. v. Ningde Amperex Tech. Ltd.*, IPR2025-00405, Paper 24 at 2-3 (Director Oct. 15, 2025) (denying institution where the petition referred to arguments advanced in other sections to argue obviousness of challenged claim).

E. The Petition Fails to Show that the Combination of Kennewick, Oviatt, and Fujimoto Renders Obvious Dependent Claims 6, 9, 12-15, 21, and 25-28

Dependent claims 6, 9, 12-15, 21, and 25-28 depend from either independent claim 1 or 16. The petition thus fails to establish that the combination of Kennewick, Oviatt, and Fujimoto renders these claims obvious for the same reasons discussed above with respect to the independent claims.

IV. GROUND 2: THE PETITION FAILS TO ESTABLISH THAT CLAIMS 2-5 AND 17-20 ARE OBVIOUS BASED ON KENNEWICK, OVIATT, FUJIMOTO, AND SHIMOMURA

Ground 2 of the petition alleges obviousness of dependent claims 2-5 and 17-20 based on the combination of Kennewick, Oviatt, Fujimoto, and Shimomura. Pet., 3. Because these claims depend from either independent claim 1 or 16, the petition fails to establish that the combination of Kennewick, Oviatt, Fujimoto, and Shimomura renders obvious the challenged claims for the same reasons discussed above with respect to Ground 1.

Moreover, additional, independent deficiencies exist with respect to the petition's Ground 2. The petition's arguments that the applied references render the claims obvious rely extensively on improper gap-filling and hindsight-driven readings of the references' teachings.

For example, dependent claim 3 recites *tracking ... contexts identified for multiple consecutive natural language user utterances to generate a context stack, the context stack including the contexts identified for the multiple consecutive natural language user utterances*. The petition does not assert that any of the references track contexts identified for multiple consecutive natural language user utterances to generate a context stack. Instead, the petition merely asserts that it would have been obvious to do so because Kennewick describes dialogs in which “the user rephras[es] a question the computer system finds ambiguous” and describes “identif[y]ing a context for each utterance it receives.” Pet., 53-55. The petition also relies on Shimomura's “conversation history memory 75,” which “stores data used to examine topics which were brought up prior to the present topic.” Pet., 55 (citing EX1014, ¶¶83, 176). The petition does not allege that this description amounts to *tracking ... contexts identified for multiple consecutive natural language user utterances to generate a context stack*—instead, the petition argues that, because “Shimomura discloses storing analogous information about a conversation in a data structure for tracking purposes,” a POSITA would have

found it obvious “to generate a context stack and store contexts in it for tracking purposes.” *Id.*, 55-56. The petition continues its hindsight-based reasoning by asserting that a POSITA would have further found it obvious to *determin[e] ... based on the short-term knowledge, whether the second natural utterance corresponds to one or more individual ones of the contexts included in the context stack*, again pointing to no disclosure in any of the applied references of such a determination. Pet., 56-57.⁴ The petition applies similar reasoning to dependent claim 4 by making a series of assertions that a POSITA would have found it obvious to *determin[e] whether the second natural language utterance corresponds to a most recent context included in the context stack and responsive to the second natural language utterance not corresponding to the most recent context, determin[e] whether the second natural language utterance corresponds to a second most recent context included in the context stack*, with little to no citation to the applied references. See Pet., 58-59 (asserting only that “Kennewick

⁴ Indeed, showcasing the petition’s hindsight-based approach to its obviousness analysis is the petition’s reliance on Kennewick’s paragraph 170, which describes the evaluation of results received by domain agent 156 when formulating an answer to a user, not for determining the correspondence of a user’s subsequent utterance to previous contexts.

discloses weighing the influence of a context based on the age of the context”) (citing, in part, EX1004, ¶170). The petition does the same for dependent claim 5. *See id.*, 60-61.

Accordingly, for these additional reasons, the petition fails to establish that obviousness of the challenged claims based on the combination of Kennewick, Oviatt, Fujimoto, and Shimomura.

V. GROUND 3: THE PETITION FAILS TO ESTABLISH THAT CLAIMS 7, 8, AND 22 ARE OBVIOUS BASED ON KENNEWICK, OVIATT, FUJIMOTO, AND MATSUDA

Ground 3 of the petition alleges obviousness of dependent claims 7, 8, and 22 based on the combination of Kennewick, Oviatt, Fujimoto, and Matsuda. Pet., 3. Because these claims depend from either independent claim 1 or 16, the petition fails to establish that the combination of Kennewick, Oviatt, Fujimoto, and Matsuda renders obvious the challenged claims for the same reasons discussed above with respect to Ground 1.

Moreover, additional, independent deficiencies exist with respect to Ground 3. As an initial matter, for certain claim limitations, the petition does not include separate arguments explaining how the applied references teach the claimed invention and instead incorporates-by-reference analyses set forth elsewhere with respect to other claims. For example, for dependent claim 7, the petition asserts that Kennewick discloses *one or more items of short-term knowledge that are based on one or more natural language utterances received during conversations*

“as discussed for preamble [1.pre] and limitation [1.a].” Pet., 62. However, preamble [1.pre] and limitation [1.a] do not recite *one or more items of short-term knowledge* and the petition fails to identify what portions of Kennewick identified for preamble [1.pre] and limitation [1.a] map to the claimed *one or more items of short-term knowledge*. This failure to explain with particularity how the prior art maps to the specific limitations recited in the challenged claims renders the petition deficient. See *Zhuhai CosMX Battery Co., Ltd. v. Ningde Ampere Tech. Ltd.*, IPR2025-00405, Paper 24 at 2-3 (Director Oct. 15, 2025) (denying institution where the petition referred to arguments advanced in other sections to argue obviousness of challenged claim). This deficiency becomes even more apparent in view of claim 8, which depends from claim 7 and recites *accumulating ... long-term knowledge based on the one or more items of short-term knowledge that are expired*. Pet., 66. By failing to specify what Petitioner believes corresponds to *the one or more items of short-term knowledge*, the petition is unclear on what items in Kennewick become expired and how those items comport with the user profile information that the petition maps to the claimed *long-term knowledge*. *Id.*, 66-67.

In addition, like Ground 2, the petition’s analysis for Ground 3 is replete with gap-filling assertions that find no basis in the applied references. For example, with respect to claim 7, the petition concludes that “[i]t is obvious from Kennewick’s disclosure” to *expir[e] ... one or more items of short-term knowledge*

that are based on one or more natural language utterances received during conversations occurring prior to the first conversation solely on the basis that “Kennewick’s computer system accumulates ‘short-term knowledge’ reflecting details about a user’s utterances during a conversation” and that “a user can have multiple conversations with the computer system.” Pet., 62-63. Moreover, the petition further alleges that because “Matsuda’s system tracks elapsed time since [a] subject person was last mentioned by [a] user” and “expires the subject person number if the elapsed time exceeds a specified amount,” then a POSITA would have found it “obvious to expire Kennewick’s short-term knowledge about a prior conversation at the beginning of a new conversation.” Pet., 64-65. However, other than stating that it would have been obvious to do so, the petition provides no explanation as to why tracking a subject based on the amount of time that has elapsed since the subject was last mentioned would have led a POSITA to expire items based on their occurrence during previous conversations. *See id.*

Accordingly, for these additional reasons, the petition fails to establish that obviousness of the challenged claims based on the combination of Kennewick, Oviatt, Fujimoto, and Matsuda.

VI. GROUND 4: THE PETITION FAILS TO ESTABLISH THAT CLAIMS 10, 11, 23, AND 24 ARE OBVIOUS BASED ON KENNEWICK, OVIATT, FUJIMOTO, AND COOPER

Ground 4 of the petition alleges obviousness of dependent claims 10, 11, 23, and 24 based on the combination of Kennewick, Oviatt, Fujimoto, and Cooper. Pet., 3. Because these claims depend from either independent claim 1 or 16, the petition fails to establish that the combination of Kennewick, Oviatt, Fujimoto, and Cooper renders obvious the challenged claims for the same reasons discussed above with respect to Ground 1.

VII. CONCLUSION

For at least the reasons discussed above, the petition fails to demonstrate a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable. Accordingly, Patent Owner respectfully requests the Director deny the petition.

Respectfully submitted,

Date: November 12, 2025

/ Matthew A. Argenti /
Matthew A. Argenti, Lead Counsel
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CERTIFICATE OF COMPLIANCE

Pursuant to §42.24(d), the undersigned certifies that this paper contains no more than 14,000 words, not including the portions of the paper exempted by §42.24(b). According to the word-processing system used to prepare this paper, the paper contains 6336 words.

Respectfully submitted,

Date: November 12, 2025

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Patent Owner's Preliminary Response was served on November 12, 2025, on the Petitioner at the electronic correspondence address of the Petitioner as follows:

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