

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
AMAZON.COM SERVICES LLC, and
AMAZON WEB SERVICES, INC.,
Petitioners,

v.

SOUNDCLEAR TECHNOLOGIES LLC,
Patent Owner.

Case No. IPR2025-00673
U.S. Patent No. 11,244,675

PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE

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The prior art plainly discloses what the '675 patent claims and describes. Consequently, Patent Owner (“PO”) attempts to distort the claims through strained and unsupported interpretations and mischaracterizations of Petitioner’s expert testimony. The Board should reject those arguments and cancel the claims.

I. CLAIM CONSTRUCTION

PO asserts that the Board’s institution decision in IPR2025-00565 found that “Amazon’s position could only succeed if the claims were to be construed.” (Paper 20 (“POR”), 4.) That is incorrect. There, the Board construed the phrase “a user” as covering “one or more users.” (IPR2025-00565, Paper 12 at 15.) The Board did so because *PO* had argued that claim 1 requires more than one user. (*Id.*) Thus, the Board construed the claims to reject PO’s argument that the claims require distinguishing between two different users’ voices. (*Id.*)

A. “Classify”

PO argues that the received voice cannot be classified based on distance alone, e.g., as a “near” or “far” voice depending on whether the distance exceeds a threshold. (POR, 5.) That argument is wrong for several reasons.

First, it contradicts PO’s position in district court. There, PO represented that the “first voice” may be a “near/close voice” and the second voice may be a “far/distant voice.” (EX-1212 ¶75; *id.* ¶78 (asserting that the claim covers providing more or less output information depending on whether the voice “has been classified as

one that corresponds to a nearby/close user or a far/distant user”), ¶63 (asserting products infringe by classifying a voice “as a first voice (near) or a second voice (far)”.)

Second, the claims require calculating the user-to-device distance “to classify the voice into either a first voice or a second voice based on the calculated distance.” (EX-1001, claim 1.) The claims do not require classification based on anything else, and the claims do not preclude classification based on distance alone. (EX-1202 ¶6.)

Third, the specification confirms that classification can be based solely on distance. (EX-1001, 10:32-38 (“distance can be used as a feature value to perform the classification”), 10:42-46; EX-1202 ¶6.)

Fourth, both experts confirm that the voice can be classified based on distance alone. PO’s expert explained that, *in one embodiment*, the voice is classified as a whisper or not (EX-2016 ¶39), but “[o]ther embodiments of the voice classifying unit use the ... distance between the speaker and the device[.]” (*Id.* ¶40 (emphasis added).) He admits the patent describes comparing distance to a threshold “for the purpose of distinguishing one class of voice from another.” (*Id.* ¶45.) Petitioners’ expert agrees that classification may be based on distance alone. (EX-1202 ¶5.)

Fifth, in district court, PO also represented that, in claims with virtually identical language, voice is classified based on distance alone.¹ (EX-1203, 45:4-10 (PO

¹ PO admits that the ’337 patent “recite[s] similar subject matter.” (POR, 4.)

stating that “[c]lassifying the incoming voice as a first recorded voice or a second recorded voice, that’s a binary decision ... [and] we did it with the distance calculation”), 68:6-9 (“the claim uses distance to classify the speaker”), 54:6-7 (invention uses “distance to classify voices”).)

PO provides a single example of classification—whisper/non-whisper (POR, 5)—but admits that “the patent discloses other methods of classifying ‘voice’ but not in connection with determining a ‘whisper’” (*id.*, 8). But PO never explains what the other potential classifications might be.

PO’s assertion that “the concept of ‘voice’ cannot be reduced to a simple metric like distance” misses the point. (*Id.*, 6.) The issue is not whether a voice has multiple variables, but which one is used to classify the voice. The ’675 patent discloses classifying a voice based on a single variable, such as distance. (EX-1001, 10:9-46; EX-1202 ¶¶5-6.)

PO suggests that “where user-to-device distance is used as a ‘feature value,’ such a distance threshold must be sufficient for the purpose of classifying voices.” (POR, 6.) But PO ignores that the classifications may simply be “near” (e.g., less than or equal to a threshold) or “far” (e.g., more than the threshold), as PO asserted in district court. PO identifies nothing, in the claims or specification, that precludes

voice classification based on distance alone.² (*Id.*)

B. “Whisper”

PO alleges Petitioners’ argument for claim 5 “relies on a de facto construction of whisper to simply mean a ‘range of speech volumes and rates.’” (POR, 7-8.) That is incorrect, as discussed below for claim 5. (*See also* Paper 1 (“Pet.”), 38.)

C. Petitioners Have Not Advanced Inconsistent Claim Constructions.

PO speculates that Petitioners will seek narrowing constructions in district court. (POR, 8.) PO’s speculation is unfounded.

II. THE GROUNDS ARE NOT DEFICIENT.

PO argues that all Grounds in the Petition are deficient. They are not.

A. The References Classify Voice Based on Distance.

PO first argues that the prior art only “discloses manners of measuring variables,” not classifying them. (POR, 12-16.) That is incorrect.

First, Dr. Stern’s testimony does not support PO’s argument. Dr. Stern’s testimony that the prior discloses measuring distance and modifying content based on the distance (EX-2017, 95:7-17) in no way suggests that the prior art does not *also* disclose voice classification based on the measured distance. Indeed, Dr. Stern

² PO’s assertion that Dr. Stern “admitted during deposition [that] while distance may sometimes be sufficient to classify voices, that is not always the case” (POR, 6) is a mischaracterization. (*See* EX-2020, 48:19-49:7.)

repeatedly explained that the prior art discloses *classifying voice based on distance*.³ (*E.g.*, *id.*, 57:6-13 (“we’re actually measuring a distance to classify a voice”), 57:18-58:5 (Shin’s Table 3 shows distance measurements “used to classify voices”), 60:13-61:4.)

PO’s argument that the references “only classify *distances* and not voices” is nonsensical. (POR, 13.) The prior art discloses devices that acquire a user’s voice, calculate the user-to-device distance, and classify the voice based on the distance—exactly as the ’675 patent does. (EX-1202 ¶8.)

PO also argues that the prior art’s “measurements or processing can be completely independent of one another.” (POR, 14.) But the references explicitly disclose that the portions PO claims are independent are used together. For example, Shin discloses that the embodiments described in Tables 1 and 3 may be used together. (*E.g.*, EX-1003 ¶¶[0049] (disclosing determining “the output scheme” which “may include an output volume level ... and an output amount of information”), [0053], [0140], claim 17; *see also id.* ¶¶[0183]-[0184]; EX-1202 ¶9.) And Shimomura’s device receives a “character string” of potential output, and based on the distance, classifies the input and determines whether to alter the output string.

³ PO cites other irrelevant testimony. (POR, 13-14.) For example, PO cites testimony about Iwase, but Petitioners never argued that Iwase discloses voice classification. And PO cites testimony about whisper, but Petitioners do not rely on disclosure in Shin or Shimomura related to whisper for voice classification limitations.

(EX-1004 ¶¶[0059]-[0066], Figs. 7-8.) Then, it again uses the distance-based classification to determine whether to alter the output volume. (*Id.* ¶¶[0066]-[0070], Figs. 9, 13.) Shimomura explicitly discloses that the first process is the input to the second. (EX-1202 ¶9.)

PO further confuses the issue by claiming, incorrectly, that Dr. Stern testified “that he did not know whether various measurements in [Shin] could have worked together.” (POR, 14-15.) But PO’s counsel asked about variables *other than distance*, and Dr. Stern responded that those variables were not relevant to the challenged claims. (EX-2017, 54:10-57:5.)

PO’s remaining arguments regarding motivation to combine (POR, 15-16) are not relevant and should be disregarded because they deal with modifications no party has argued are needed.

B. Motivations to Combine

PO takes issue with two motivations to combine relied on in the institution decision, arguing they are “conclusory” and “pro forma.” (POR, 16-19.) They are not. The motivations are not “simply identifying elements known in the art,” as PO argues (*id.*, 17); rather, they explain what elements would be combined (e.g., Aoyama’s word replacement and Shin’s distance-based content abbreviation/simplification) and what beneficial, predictable results would be produced (e.g., a device that uses word replacement to simplify content for distant users). (Paper 15 (“DI”),

26-27; Pet., 19-20.) PO’s assertion that “Dr. Stern stated that he does not even know if the various modifications could work” is incorrect. (POR, 17.) Dr. Stern was not asked, and was not testifying, about any motivation to combine presented in the Petition. (EX-2017, 56:15-57:5.)

PO’s argument also ignores the many additional motivations the Petition provided. (*E.g.*, Pet., 19-20 (four reasons), 25-27 (seven reasons).) Even if the two motivations cited by PO did not identify “a reason *why* a POSITA would have been so motivated” as PO argues (POR, 18-19), other motivations in the Petition certainly do. For example, “Aoyama’s word replacement feature furthers Shin’s primary goal: to simplify output for users at greater distances and make the information easier for such users to grasp.” (Pet., 25.) PO cannot simply ignore the contents of the Petition while arguing that they are deficient.

C. There Was No Improper Hindsight.

Dr. Stern never “admitted to relying on ‘20/20 hindsight’ in modifying the references” as PO asserts. (POR, 19.) Dr. Stern merely stated that “with 20/20 hindsight,” he might have *provided slightly different annotations in his declaration* for greater clarity. (EX-2017, 59:22-60:5; 67:11-15.)

PO cites two cases relating to hindsight but never explains how those cases are relevant. (POR, 20.) They are not relevant here because Petitioners have provided many motivations to combine that do not rely on hindsight.

D. Dr. Stern’s Testimony Is Reliable.

PO alleges that Dr. Stern did not properly analyze the claims and prior art. (POR, 21-23.) Each allegation is belied by Dr. Stern’s testimony.

First, Dr. Stern’s testimony that Iwase discloses *more than* what was relied on in the Petition and in his declaration is unremarkable. (POR, 21-22; EX-2017, 102:5-103:16.) Dr. Stern acknowledged that he had not relied on the additional disclosure (EX-2017, 103:6-12) and noted the futility of attempting to include every possible permutation of references in a declaration (*id.*, 103:14-16). Such testimony demonstrates the thorough nature of Dr. Stern’s analysis—he considered the references’ full disclosure and was selective about the combinations presented.

Second, Dr. Stern did not testify that a user’s speech in the ’675 patent is “always in the form of a question.” (POR, 22.) He testified that the input speech is “[t]ypically ... in the form of a request for information” and that the patent’s examples “typically” have a question-and-answer format. (EX-2017, 26:21-27:5.) Regardless, this testimony is not relevant to any issue.

Third, Dr. Stern’s testimony that some of Shin’s disclosure was not relevant to the ’675 patent’s claims is not an “admi[ssion] that he had not considered the full disclosure of Shin.” (POR, 22; EX-2017, 55:8-57:5.)

Fourth, Dr. Stern’s routine annotations showing examples of how a POSITA would interpret Shin’s disclosure are not “inject[ing] his own inferences into the

analysis to supplement the disclosure of Shin.” (POR, 22; EX-2017, 57:18-59:3; EX-1002 ¶61.) Nor did he testify that “Shin did not actually disclose classifying voices,” only that Shin’s Table 3 did not explicitly use the word “voice.” (POR, 22; EX-2017, 48:3-7, 49:7-15.) Dr. Stern has consistently testified that Shin’s Table 3 discloses voice classification based on distance. (EX-1202 ¶12; EX-2020, 71:18-72:7, 68:16-69:18, 70:16-71:6.)

Fifth, because Shin’s output content is linked to its voice classifications, Dr. Stern’s reliance on Shin’s disclosure that output may be “classified dichotomously” was proper to show that Shin’s voice classifications may be dichotomous. (POR, 22; EX-1002 ¶61.)

Sixth, Dr. Stern did not “incorrectly link[] various distance ranges to difference voice categories” in Shin. (POR, 22.) Dr. Stern merely testified that all distances greater than 1 meter could be classified as a “first voice.” (EX-1002 ¶61.) That testimony is not “incorrect[]” merely because PO disagrees with it.

Seventh, as with Shin, Dr. Stern’s routine annotations showing examples of how a POSITA would interpret Shimomura’s disclosure are not “inject[ing] his own inferences.” (POR, 23; EX-2017, 119:6-22, 120:3-13; EX-1002 ¶170.) Nor did Dr. Stern testify that “Shimomura does not actually disclose classifying voices,” only that Shimomura’s Figure 7 did not explicitly use the word “voice.” (POR, 22; EX-2017, 117:1-21, 119:6-22.)

Eighth, no party has argued that Iwase discloses distance calculation. (POR, 23.)

Finally, the fact that Dr. Stern provides his services to Amazon at a discounted rate (POR, 23) does not establish any bias.

Thus, there is no reason to find Dr. Stern’s testimony unreliable.

III. GROUND 1A: SHIN AND AOYAMA

A. Shin Discloses Classifying Voice Based on Distance.

PO argues that Shin fails to disclose basing any function or output on “voice” and that the only disclosure of “voice” in Shin relates to generating content. (POR, 23-24.) PO is mistaken.⁴

Shin discloses “analyz[ing] a voice input[.]” (EX-1003 ¶[0048].) Shin discloses receiving a user’s speech “*as a voice input ... to determine an output scheme ... from an analysis of the voice input[.]*” (*Id.*, Abstract (emphases added); *see also id.*, Fig. 5A (obtain “voice input”).) Shin further discloses analyzing voice—for example, evaluating speech rate, volume, and/or user-to-device distance—to alter output, just like the ’675 patent.⁵ (*See, e.g.*, EX-1003 ¶¶[0049], [0053]; EX-1202 ¶11.)

⁴ PO also dismisses the Petition as “conclusory,” quoting the topic sentence of a paragraph while ignoring the supporting sentences after it. (POR, 24.)

⁵ PO argues that Dr. Stern testified otherwise, but mischaracterizes his testimony. (POR, 23-24.) Dr. Stern’s testimony that Shin’s presentation of information “is not based on the incoming speech” refers to the *content* of the incoming speech. (EX-2017, 65:6-22.)

PO next argues that Shin lacks express disclosure of classification. (POR, 24-25.) PO relies on the mistaken premise that the reference must use those exact words. *In re May*, 574 F.2d 1082, 1090 (C.C.P.A. 1978) (reference need not describe claimed subject matter in *ipsisssimis verbis*); *Whitserve, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 21 (Fed. Cir. 2012). The Petition and Dr. Stern each explained how Shin expressly discloses voice classification. (Pet., 10-15; EX-1002 ¶¶54-70).)

PO next argues that Shin’s Table 3 discloses “calculation of distance and nothing else.” (POR, 25.) But Table 3 does not disclose a distance *calculation*. The proximity sensor and, optionally, the processor calculate distance. (EX-1003 ¶¶[0075]-[0077], claim 9.) Table 3, by contrast, expressly discloses *classifications based on distance*. (Pet., 12-14; EX-1202 ¶12.)

TABLE 3	
Distance (D) between user and electronic device	Output amount of information of content
$D < 1\text{ m}$	Amount of information of original content
$1\text{ m} \leq D < 2\text{ m}$	Content of first abbreviation level
$2\text{ m} \leq D < 3\text{ m}$	Content of second abbreviation level
$3\text{ m} \leq D < 4\text{ m}$	Content of third abbreviation level
$D \geq 4\text{ m}$	Content of fourth abbreviation level (abstract content)

(EX-1003, Table 3 (consolidated).) The left column includes categories (or classifications) for the distance D. (*Id.*) And the right column describes the output resulting from each such classification. (*Id.*)

This is exactly how the ’675 patent describes voice classification. It describes

two classes: (1) $D \leq x$; and (2) $D > x$, where x is a threshold value. (EX-1001, 10:42-46; EX-1202 ¶13.) The device receives a voice, calculates the user-to-device distance D , determines which distance-based category (class) applies, and provides appropriate output. (*Id.*; EX-1001, 11:5-11.) Shin discloses the same thing. The only difference is that the '675 patent gives the two classes generic names: “V1A” (or “first voice”) and “V1B” (or “second voice”). Shin does not expressly refer to the classes’ *names*, but still discloses the classifications.

PO’s irrelevant hypothetical argues that Shin would be incapable of distinguishing between “two users, with two different voices, [who] were standing [at] the same distance.” (POR, 25-26.) But the claims do not require distinguishing between two different users’ voices. When two users are the same distance from the '675 patent’s device (e.g., exceed the distance threshold), each user’s voice would fall into the second class ($D > \text{threshold}$), both would be classified as “V1B,” and the resulting output would include the same content. The same is true for Shin.

PO next argues that “a POSITA would never have understood Shin’s disclosure of distance to be synonymous with ‘voice’” or with “‘classification.’” (POR, 26.) But that is not what Petitioners argued.

PO’s assertion that Dr. Stern testified that Shin’s Table 3 “says ‘nothing’ other than ‘about the distance between the user and the electronic device’” is misleading. (POR, 27-28.) Dr. Stern testified that, in the context of the '337 patent, voice

classification depends on the “input to the device.” (EX-2020, 24:9-17.) He also explained how Shin’s Table 3 discloses voice classification. (*Id.*, 71:18-72:7, 68:16-69:18, 70:16-71:6.) For the specific questions quoted in the POR, PO’s counsel made it clear that he was *not* asking about classification. (*Id.*, 72:20-22.) PO cannot now argue that Dr. Stern’s testimony was an admission that Table 3 does not disclose voice classification.

Again, in district court, PO alleged that the voice may be classified as “near” (first voice) or “far” (second voice) based on the user-to-device distance. (EX-1212 ¶¶75, 78, 63.) That is exactly what Shin discloses.

Thus, Shin plainly discloses classifying a user’s voice into one of two classes (e.g., “first voice” or a “second voice”) based on the user-to-device distance.

B. Shin and Aoyama Disclose Replacing Words.

1. Shin

PO first argues that “Shin provides no indication that the word ‘abbreviation’ means or includes ‘replacing words’” in output. (POR, 29.) But a POSITA would have readily understood exactly that. (Pet., 22-23; EX-1002 ¶92; EX-1207, 2 (defining “abbreviation” as “a shortened form of a written word or phrase used in place of the whole”); EX-1202 ¶14.) For example, a POSITA would have understood Shin to disclose that the original output may include a full place name (e.g., “Patent and Trademark Office”) and the abbreviated content may include an abbreviated place

name (e.g., “PTO”), which involves word replacement. (EX-1202 ¶14.)

PO argues that, in Shin, “abbreviating content involves excluding certain portions of output content.” (POR, 29.) That is true in the example PO cites. But that example does not limit Shin’s disclosure to *only* abbreviating output by excluding words rather than replacing words. (EX-1202 ¶15.)

2. Aoyama

PO acknowledges that Aoyama discloses word replacement. (POR, 30-31 (admitting Aoyama discloses replacing “Taro Yamada” with “Mr. Yamada”).) Nevertheless, PO attempts to dismiss Aoyama for two reasons.

First, PO argues that Aoyama does not replace words based on voice classification. (*Id.*, 30.) But Petitioners did not rely on Aoyama for voice classification; Shin discloses that. (Pet., 10-15.)

Second, PO details two ways Aoyama’s system might decide to replace words. (POR, 31-32.) Both are irrelevant here because Petitioners rely on Shin’s voice classification to determine when words should be replaced. (Pet., 22-25.)

3. Motivation to Combine

PO’s remaining arguments relate to whether a POSITA would have combined the teachings of Shin and Aoyama. Notably, however, neither PO nor its expert address, let alone rebut, any of the seven motivations Dr. Stern provided. (*See* EX-1002 ¶¶97-101.) This un rebutted testimony establishes obviousness.

PO argues that “Aoyama teaches that words are *only* to be chosen in response to ‘speaking style,’” and thus “[a] POSITA would have understood Aoyama as teaching away from replacing words based on distance.” (POR, 32.) PO is wrong.

First, Aoyama does not teach that word replacement occurs *only* in response to speaking style; rather, Aoyama teaches speaking style as one option for determining word replacement. (*See, e.g.*, EX-1010 ¶¶[0128], [0162]; EX-1202 ¶17.)

Second, merely because a reference teaches accomplishing something one way (e.g., replacing words based on speaking style) does not discourage a POSITA from other ways (e.g., replacing words based on distance). *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (“express[ing] a general preference for an alternative invention” is not teaching away); *UCB, Inc. v. Actavis Labs. UT, Inc.*, 65 F.4th 679, 692-93 (Fed. Cir. 2023); *Global Shade Corp. v. With-U E-Commerce (Shanghai) Co., Ltd.*, IPR2023-00580, Paper 34 at 27-28 (P.T.A.B. Aug. 7, 2024). PO argues that word replacement based on distance “would have led to a response with which ‘the user may feel uncomfortable,’” citing an example in Aoyama of a device responding in military time to a user who prefers normal time format. (POR, 32.) But Aoyama discloses many types of word replacement, including replacing full names with nicknames and complicated date formats with simpler ones. (Pet., 25.) Such replacements would have made Shin’s output easier to understand at greater distances. (*Id.*;

EX-1202 ¶18.) And PO points to nothing in Aoyama that explicitly discourages replacing words based on distance. (POR, 31-32.)

Dr. Stern specifically explained why a POSITA would have been motivated to implement Aoyama’s word replacement in Shin’s device, which alters output based on distance. (EX-1002 ¶¶97 (output easier for users to understand at greater distances), 99 (address known privacy concerns), 101 (only other way to abbreviate content as Shin describes).) Neither Plaintiff nor its expert disputed these rationales.

Third, PO argues that because Aoyama includes an embodiment that is similar to Shin’s system (i.e., adjusts “amount of information output”), a POSITA would not have combined any other disclosure in Aoyama with Shin. (POR, 32-33.) Not so—the prior art “must be considered for everything it teaches” and not just for a preferred or similar embodiment. *Recor Med., Inc. v. Medtronic Ireland Mfg. Unlimited Co.*, No. 23-2251, 2025 WL 944511 at *2-*3 (Fed. Cir. May 27, 2025); *Raytheon Co. v. Sony Corp.*, 727 F. App’x 662 (Fed. Cir. 2018). The Petition and Dr. Stern provided ample motivations to combine other disclosures in Aoyama with Shin. (Pet., 25-28 (citing EX-1002 ¶¶96-103).) Moreover, PO’s argument contravenes Aoyama’s disclosure that a POSITA “may find various alterations and modifications” within the scope of Aoyama’s disclosure (EX-1010 ¶¶[0255]-[0256].)

**C. Claim 5: Shin Discloses Classifying Voice
When the User Whispers.**

PO argues that claim 5 requires determining that the voice is a whisper. (POR,

36.) It does not. Instead, claim 5 requires that the device be configured to determine that “the voice” is “the predetermined voice” in circumstances where the user whispers to the device. (EX-1001, claim 5; EX-1202 ¶19.) Nothing in the claim requires the device to *determine* whether the received voice is a whisper.

PO’s reliance on the specification is misplaced. The cited portion of the specification does not address the same situation. (POR, 36; *compare* EX-1001, claim 5 (“when the voice spoken by the user is a whisper”) *with id.*, 9:64-10:1 (“when the voice V1 is determined to be a whisper as a result of analysis”).) Thus, PO’s arguments are premised on an improperly narrow reading of the claim. (EX-1202 ¶20.) Regardless, even under PO’s interpretation, claim 5 is invalid for the reasons set forth in Ground 4. (Pet., 65-67.)

PO also mischaracterizes the Petition. Petitioners did not “equat[e] a whisper to be a range of volumes and rates.” (POR, 34.) Rather, Petitioners explained that “a POSITA would have understood Shin’s disclosure to encompass receiving and processing as wide a range of speech as possible, including whispered speech,” or that it would have been obvious to configure Shin’s devices to do so. (Pet., 38-40.) PO fails to rebut this basic premise.⁶

⁶ Contrary to PO’s assertion (POR, 35), the Petition cited Iyer to show that a POSITA would have configured Shin’s device to process whispered speech, a modification that was entirely within the POSITA’s knowledge. (Pet., 38-40.) Such evidence of “general background knowledge in the art” is proper. (DI, 22 n.5); *see also Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013).

PO's assertion that Petitioners' understanding of claim 5 would "vitate any difference in scope between claim 1 and 5" (POR, 34) is incorrect. The device in claim 1 is not required to process whispered speech; the device in claim 5 is.

D. PO's Remaining Arguments Fail.

PO argues that, with respect to the "second output sentence" limitation, Dr. Stern "attempted to supplement the actual disclosure of Shin—and his declaration—with his own assumptions." (POR, 37.) Not so. The Petition, and Dr. Stern's declaration, explain how Shin discloses a second output sentence that includes both intention information and content information. (Pet., 28-29; EX-1002 ¶¶104-08.) Dr. Stern testified that "the intention information has to do with what question you are asking" (in Shin's example, "time" represents asking for the current time) and acknowledged that it is "already implicitly in there"—for example, because Shin discloses that an appropriate response will begin with "The current time is." (EX-2017, 82:2-6; Pet., 28-29.) And Shin's response will "have all of the components included," including the content information (e.g., "nine-ten AM"). (EX-2017, 82:9-15; Pet., 28-29.) Thus, Dr. Stern's testimony consistently shows that Shin discloses this limitation. (*See also* EX-2017, 130:12-132:2.)

PO further complains that "[t]he Petition focuses on the claimed functions without identifying what *component* allegedly accomplishes those functions." (POR, 38.) Not so. The Petition consistently identifies the components

accomplishing the claimed functions, which are the same components disclosed in the '675 patent. (*E.g.*, Pet., 8-9 (processor/CPU), 11 (proximity sensor).)

IV. GROUND 1B: SHIN AND IWASE

A. Shin and Iwase Disclose and Render Obvious Every Claim Limitation.

Repeating its arguments from Ground 1A, PO argues Shin does not disclose classifying a voice and/or replacing words. (POR, 39-43.) Shin does. (*Supra* §§III.A-III.B.)

PO admits Iwase discloses “word replacement,” but argues it “does not disclose replacing words *based on voice classification*.” (POR, 39-40 (emphasis added).) Even if true, that would be irrelevant. Petitioners relied on Shin, not Iwase, for voice classification. (Pet., 10-15.)

PO next asserts that “[t]he word ‘replace’ does not appear in Iwase.” (POR, 40.) But Iwase expressly discloses word replacement, such as replacing “I recommend” with “You should.” (*Id.*, 39-40 (quoting Iwase’s disclosure).) Thus, Iwase discloses providing output where at least one word “is replaced with another word” as recited in claim 1. (EX-1002 ¶144; EX-1017, 15:6-14.)

B. Motivation to Combine

PO argues that no motivation exists because “Iwase is not concerned at all with distance.” (POR, 41.) That is wrong. Iwase teaches determining the user-to-device distance and altering output based on that distance. (Pet., 44 (citing EX-1017,

9:59-10:9, 11:32-39, 12:4-9).) Petitioners’ expert explained why these disclosures would have motivated a POSITA to implement Iwase’s word replacement in Shin’s device, which abbreviated output based on distance. (EX-1002 ¶150.) Neither PO nor its expert address the relevant Iwase disclosure or the motivation explained by Petitioners’ expert.

PO next argues that Petitioners provide a single rationale for the combination. (POR, 41 (citing Pet., 42).) In fact, Petitioners and their expert provided *seven* motivations, most of which stand undisputed and un rebutted. (Pet., 42-44.)

PO argues that one motivation—allowing a user “to grasp notification contents more effectively”—is “an empty, conclusory assertion.” (POR, 41; EX-2017, 2:11-14.) It is not. Petitioners and Dr. Stern explained that a POSITA would have configured Shin’s processor to adjust the output based on the user-to-device distance by incorporating Iwase’s word replacement, for example, to replace harder-to-understand words with simpler ones when the user is far away. (Pet., 42 (citing EX-1002 ¶¶145-51).) Iwase describes the benefit of word replacement, namely allowing a user to “grasp notification contents more effectively” (*id.*) and a POSITA would have been motivated to implement the word-replacement feature to gain those benefits (EX-1002 ¶146). That rationale is neither empty nor conclusory.

Lastly, PO argues a POSITA would not have modified Shin because “abbreviated information sufficed for Shin’s purposes.” (POR, 41.) But even if Shin

worked satisfactorily, a POSITA would still have been motivated, in view of Iwase, to improve Shin’s system to convey simpler information to users at greater distances using word replacement. (EX-1002 ¶¶145, 147.) Courts have repeatedly rejected PO’s reasoning. *Stryker Eur. Operations Holdings LLC v. OsteoMed LLC*, No. 23-2397, 2025 WL 2249005 at *8 (Fed. Cir. Aug. 7, 2025) (“just because [two references] met the same need ... in different ways would not mean that a POSA would reject the idea of modifying [one reference’s] way of doing so by adding [another reference’s] solution”); *Bestway (USA), Inc. v. Intex Mktg. Ltd.*, PGR2017-00003, Paper 54 at 27-30 (P.T.A.B. Nov. 7, 2018).

The remainder of PO’s arguments (POR, 42-43) merely repeat arguments from prior grounds. Those arguments should be rejected for reasons discussed.

V. GROUND 2A: SHIMOMURA AND AOYAMA

PO’s arguments for Shimomura mirror those for Shin and should be similarly rejected.

A. Shimomura Discloses Voice Classification.

PO argues that Shimomura does not disclose classifying voices because it does not use the word “voice.” (POR, 43-44.) But Shimomura expressly discloses analyzing and classifying “voice” and “speech.” (Pet., 49-50 (citing Fig. 4); EX-1004, Fig. 4 (“voice recognition”).) Regardless, the reference is not required to use the claim’s exact words. *May*, 574 F.2d at 1090; *Whitserve*, 694 F.3d at 21.

There can be no dispute that Shimomura analyzes voice (e.g., speech) input (Pet., 48-49 (citing EX-1004 ¶[0040])) and classifies it based on distance (Pet., 49-50 (citing EX-1004 ¶[0060]-[0064], Fig. 7)). This is exactly what the claims require.

PO argues that Figure 7 discloses “a calculation of distance and nothing else.” (POR, 44.) Not so. Figure 7 discloses classification of voice based on distance. PO admits that Figure 7 discloses “classes of distances.” (*Id.*; EX-1201, 21:15-18.) What PO ignores is that it describes classes or categories of distances *from which the voice is received*. Thus, Shimomura discloses classifying voice based on whether the user’s distance exceeds a threshold (e.g., 350cm), exactly as in the ’675 patent. (EX-1001, 10:42-46.) The top row of Figure 7 includes two discrete classifications into which the voice may fall. (EX-1004, Fig. 7; EX-1201, 21:15-22; EX-1202 ¶21.) The bottom row describes the output result of each classification. (*Id.*)

PO argues that Shimomura’s disclosure of distance is not synonymous with voice or classification. (POR, 44-45.) But Petitioners never argued that.

PO concludes that Shimomura “correlates the output content and volume based on distance without performing the intermediate step of classifying the voice.” (POR, 45.) That is incorrect. Shimomura uses distance to classify the voice as coming from less than or more than a threshold distance. The classification determines the output. Again, this is precisely what the ’675 patent claims. (*Id.*; EX-1001, 10:42-46; EX-1202 ¶22.)

B. Motivation to Combine

PO argues that a POSITA would not have combined Aoyama’s word replacement with Shimomura. (POR, 46-48.) PO’s arguments are identical to the arguments made with respect to Shin and should be rejected. (*Supra* §III.B.3.)

C. Claim 5: Shimomura Discloses Classifying Voice When the User Whispers.

PO argues claim 5 requires determining that the voice is a whisper. (POR, 50.) This is incorrect.⁷ (*Supra* §III.C; POR, 48-51.) PO does not dispute that Shimomura’s device “receives and processes speech input,” that “whisper is a form of speech,” and that “Shimomura discloses classifying a whispered voice.” (Pet., 58-60; POR, 48-51.) Nor does PO dispute that a POSITA would have been motivated to modify Shimomura’s device to do so. (*Id.*)

D. PO’s Remaining Arguments Fail.

Regarding the “second output sentence” limitation, PO argues that “there is no disclosure in Shimomura that the ‘original content’ ... includes *both* all of the intention information and the content information.” (POR, 51-52.) PO is wrong. Shimomura provides an example of such an output sentence: “Today’s weather in Tokyo is sunny.” (Pet., 57-58 (citing EX-1004 ¶[0065]).) That sentence conveys all of the intention information (“weather”) and content information (“Tokyo” and

⁷ PO’s arguments regarding Iyer (POR, 49) fail. (*Supra* §III.C.)

“sunny”). (*Id.* (citing EX-1002 ¶194).)

PO again argues that the Petition fails to identify the components. (POR, 52.)

Not so. (*E.g.*, Pet., 48-49 (processor/CPU), 49 (camera or other distance sensor).)

VI. GROUND 2B: SHIMOMURA AND IWASE

PO makes identical arguments with respect to Ground 2B as for Ground 1B.

(*Compare* POR, 53-56 *with id.*, 39-43.) They should be rejected. (*Supra* §IV.)

VII. GROUND 4: SCHUSTER

PO admits Schuster discloses detecting whisper. (POR, 56-59.) PO argues Schuster’s “device does not respond to the whisper-determination,” but then admits that it does, i.e., by changing mode and outputting different results.⁸ (*Id.*, 57; EX-1016, 3:31-39.)

PO argues a POSITA “would not have known how to apply, and would have had no expectation of success in applying, [a] teaching of detecting whisper using a microphone” with Shin’s or Shimomura’s distance-based classification. (POR, 58). But Petitioners’ expert explained why a POSITA would have been motivated to implement whisper detection in those systems and testified that doing so would have involved only “straightforward adjustments (if any) to the existing voice detection

⁸ Dr. Stern’s testimony that Schuster contains “not a lot of specificity” regarding whisper detection is irrelevant because Schuster discloses one method (cepstral analysis) and both experts agree a POSITA knew how to detect whispers. (EX-1016, 3:8-11); EX-1202 ¶23; *see* EX-1201, 15:9-16:13.)

and processing hardware or software.” (EX-1002 ¶¶229-30.) And, Schuster discloses classifying based on both distance and whisper detection. (*Id.*; EX-1016, 3:27-30.)

PO’s argument is also wrong as a matter of law. The ’675 patent contemplates using whisper detection and proximity together. (EX-1001, 9:58-10:46, 11:1-4.) The patent describes no problems the inventors overcame in doing so and provides no guidance for how the variables should be analyzed in combination. (EX-1202 ¶23.) Lacking such disclosure, PO cannot claim a POSITA would not have known how to combine, or reasonably expected success in combining, the variables. *Smith & Nephew, Inc. v. Rea*, 721 F.3d 1371, 1381 (Fed. Cir. 2013). If PO’s arguments are true, claim 5 is invalid for lack of enablement.

VIII. PO’S ADDITIONAL ARGUMENTS ARE UNAVAILING.

PO makes no arguments specific to the substance of Grounds 3 or 5. (POR, 56, 59-60.)

PO’s assertion that Shin and Shimomura describe simpler systems than the ’675 patent is wrong. Those references disclose the very system the ’675 patent describes and claims. (EX-1202 ¶10.)

PO argues Petitioners fail to properly apply the *Graham* factors. (POR, 61-62.) This argument has been rejected twice. (Paper 5, 44-49; Paper 8, 27-31.) It should be rejected again. (*E.g.*, Paper 9, 29-33.)

PO argues Petitioners do not disclose the grounds “with particularity.” (POR, 62.) The Board should again reject that argument. (Paper 8, 38.) Petitioners identify Kristjansson’s disclosure with particularity and explain why a POSITA would have combined it with the other references. (Pet., 67-69.)

IX. CONCLUSION

Petitioners respectfully request the Board cancel the challenged claims.

Respectfully submitted,
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March 18, 2026

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that this **PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE** contains 5,573 words according to the word-processing program used to prepare this paper. The foregoing word count complies with the 5,600 word type-volume limit specified by 37 C.F.R. § 42.24(c)(1).

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **PETITIONERS’
REPLY TO PATENT OWNER’S RESPONSE** is being served on March 18,
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