UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC., META PLATFORMS TECHNOLOGIES, LLC, and TWISTED PIXEL GAMES, LLC,
Petitioner,

v.

EIGHT KHZ, LLC,
Patent Owner.

IPR2023-01020
Patent 10,448,184 B1

PATENT OWNER'S MOTION TO EXCLUDE

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I. INTRODUCTION

Patent Owner submits this motion pursuant to 37 C.F.R. §§ 42.62 and 42.64(c) and in accordance with Due Date 5 of the Parties' Joint Stipulation to Change Due Dates 1, 2, 3, 5 and 6 of the Scheduling Order (Paper 21). PO requests the exclusion of certain paragraphs of Dr. Roginska's declarations (Ex. 1003 and Ex. 1146) as listed below. PO timely objected to these paragraphs of these Exhibits in its written Objections to Evidence. Paper No. 13 (objecting to paragraphs of Exhibit 1003); Paper No. 26 (objecting to paragraphs of Exhibit 1146). Petitioner relies on Dr. Roginska's declarations in its Petition (Paper No. 2) and Reply (Paper No. 25).

The Federal Rules of Evidence (FRE) govern the admissibility of evidence in *inter partes* review proceedings. 37 C.F.R. § 42.62. As shown in this motion, the challenged evidence fails to include all related parts "that in fairness ought to be considered at the same time" under FRE 106 and contains irrelevant and prejudicial information that should be excluded under the FRE. FRE 401, 402, and 403. In addition, the challenged evidence fails to meet the standards of FRE 702(b) permitting expert testimony "in the form of an opinion if: …(b) the testimony is based on sufficient facts or data…" and 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.").

The Board should not dismiss this Motion as moot if the Board does not rely on the challenged evidence in reaching its Final Written Decision. Instead, PO respectfully requests that the Board rule on the Motion so that Petitioner cannot continue to rely upon the challenged evidence on appeal. Not excluding the challenged evidence would force PO to address it again, e.g., on appeal, thereby wasting judicial resources.

A. Exhibit 1003 – Declaration of Dr. Agnieszka Roginska in Support of Petitions for Inter Partes Review of U.S. Patent Nos. 10,368,179 and 10,448,184 ("Dr. Roginska's Declaration")

The paragraphs of Dr. Roginska's Declaration described below should be excluded as they mischaracterize the prior art by failing to include all related parts "that in fairness ought to be considered at the same time" under FRE 106; contain irrelevant, misleading, and prejudicial information that should be excluded under FRE 401, 402, and 403; and fail to meet the standards of FRE 702(b) permitting expert testimony "in the form of an opinion if: …(b) the testimony is based on sufficient facts or data…" and 37 C.F.R. § 42.65(a).

1. Hypothetical combination of Clement, Osman, and Sauk

Dr. Roginska opines on the hypothetical combination of Clement, Osman, and Sauk at paragraphs 111-15, but this hypothetical combination is improper, as previously recognized by the Board, and thus these paragraphs should be excluded.

For example, Dr. Roginska states that

> A POSA would have combined Clement and Osman with Sauk to provide additional teachings regarding binaural sound, including signaling the importance of things or events to provide flexibility and additional options for different conditions, that enhance the system's ability to alert or warn the user when the user approaches the boundary or when transitioning from a virtual environment to the real world… [A] POSA would have known that multiple options for audible indications are available and different ones may be preferable in different situations.

¶111; *see also* ¶112 (opining that "because users are able to perceive changes in audio dimension, incorporating a change in audio dimension to the binaural audio warning of Clement and Osman would enhance the user's ability of the user to perceive the warning" and a "POSA would have been motivated to make this change in order to enhance the effectiveness of the warning to ensure that the warning would be heeded by the user") (internal citations omitted); ¶113 (opining "a POSA would have been further motivated to provide more effective auditory displays that serve as audible warnings, as described in Sauk, for the safety of the user and to prevent injury to the user); ¶114 (opining "a POSA would have expected to succeed in

combining the warning of Sauk with Clement and Osman because of allegedly common components among the systems); ¶115 (opining that "Sauk is directed to the same field of endeavor as Clement and Osman: VR environments" even though Sauk is not directed to an immersive VR environment but instead discloses several applications of its system in a real-life military reconnaissance mission. Sauk, 10:44-15:23). Other paragraphs of Dr. Roginska's Declaration rely on this section. *See, e.g.,* ¶¶175; 183; 267 ('179 patent); 312 ('184 patent); 313 ('184 patent).

As recognized by the Board, however, these statements are unsupported: "Petitioner provides no persuasive reason why one of ordinary skill in the art would have ignored Sauk's disclosure of adding binaural sound for alerts and instead look to ***Sauk's non-alert context*** for removing binaural sound." Decision, 17 (emphasis added); *see also* Decision, 16 ("Petitioner incorrectly asserts that 'Sauk teaches changing from binaural to stereo or monophonic sound to signal 'relevancy or importance,' such as warning of a 'hazard.'"). As a result, Dr. Roginska's testimony in these paragraphs is not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a) and should be excluded under FRE 401, 402, and 403.

At paragraph 173, Dr. Roginska states that "Sauk teaches that 'less relevant audio' would have been 'change[d]' from binaural to 'a monophonic (1-D) or stereophonic (2-D) dimension.'" Dr. Roginska mischaracterizes this disclosure of

Sauk by implying that an environment that the user is leaving is "less relevant audio." Indeed, Sauk later details adding audible warnings as 3-D binaural sounds to warn the user of hazards in column 12, lines 33-51. Thus, Dr. Roginska's testimony in this paragraph fails to include all related parts "that in fairness ought to be considered at the same time" under FRE 106, is not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a) and should be excluded under FRE 401, 402, and 403.

2. Mischaracterization of disclosure in specification and Lyren

Dr. Roginska also mischaracterizes the disclosure in the '184 specification and the Lyren reference, which is a parent of the '179 and '184 patents asserted to be prior art. At paragraph 30, Dr. Roginska states that "none of these [examples of events from the '184 specification] is the claimed 'warning the user that the user is leaving the 3D virtual environment.'" Dr. Roginska does not provide any explanation to support this statement, which indeed is contradicted by the disclosure in the '184 specification as shown in PO's briefing. *See, e.g.,* POR, 39-52. Thus, Dr. Roginska's testimony in this paragraph fails to include all related parts "that in fairness ought to be considered at the same time" under FRE 106, is not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a) and should be excluded under FRE 401, 402, and 403.

Dr. Roginska provides another conclusory and erroneous statement in paragraph 251: "Lyren does not teach leaving the environment as a specific event that would warrant alerting or warning the user." Dr. Roginska fails to consider Lyren's disclosure of "a method to determine a location of a person and to take an action when the person moves into a restricted area in accordance with an example embodiment" where "restricted areas include… an area in which it is dangerous to localize sound" and an example of such location is a "construction zone or other inherently dangerous or hazardous area" and event triggers may be based upon "position or movement or orientation of a person or head of the person," "distance from the person to an object (such as distance from the person to a wall or an obstruction)," "safety," and proximity to or being at a restricted area." Ex. 1008, ¶¶ 8, 65, 118, 123; *see also* Ex. 1028. Thus, Dr. Roginska's testimony in paragraph 251 fails to include all related parts "that in fairness ought to be considered at the same time" under FRE 106, is not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a) and should be excluded under FRE 401, 402, and 403.

B. Exhibit 1146 – Declaration of Dr. Agnieszka Roginska in Support of Petitioner's Reply ("Dr. Roginska's Supplemental Declaration")

1. Hypothetical combination of Clement, Osman, and Sauk

Dr. Roginska's Supplemental Declaration also includes several statements regarding the hypothetical combination of Clement, Osman, and Sauk that should be excluded because they fail to meet the standard of FRE 702(b) and violate 37 C.F.R. § 42.65(a), for the same reasons as established above regarding Ex. 1003. At paragraph 39, Dr. Roginska opines that "The POSA further would have combined Sauk with Clement and Osman such that the sound from the environment, which is becoming less important or relevant, would switch to mono or stereo from binaural." Clement and Osman, however, do not disclose anything about less important or less relevant sound. Thus, Dr. Roginska's position that a POSA would have combined Sauk with Clement and Osman ignores and mischaracterizes the disclosure in Clement and Osman and should be excluded under FRE 106, 401, 402, and 403.

Other paragraphs in Dr. Roginska's Supplemental Declaration similarly suffer from a failure to include all related parts "that in fairness ought to be considered at the same time" under FRE 106, and thus are not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a).

¶37: "[a] POSA would have combined Clement and Osman with Sauk to provide additional teachings regarding binaural sound, including signaling the

importance of things or events to provide flexibility and additional options for different conditions, that enhance the system's ability to alert or warn the user when the user approaches the boundary or when transitioning from a virtual environment to the real world." "[A] POSA would have sought Sauk's teachings to introduce multiple layers of warnings, to ensure user safety as the user leaves a virtual environment."

¶38: "POSAs would have understood from Sauk that binaural alerts can be used to alert/warn the user of immediate hazards, and that less relevant audio can be transitioned to mono/stereo to alert that user that the audio is becoming less important/relevant." "POSAs would have understood that these alerts/warnings could be used together to introduce multiple layers of warnings: transitioning less relevant sound to mono/stereo would encourage a user to focus on the remaining binaural warning indicating an immediate hazard. A POSA would have combined Sauk with Clement and Osman to use a binaural alert when the user is approaching a hazard (as taught by Sauk) such as a wall (as taught by Clement)."

Dr. Roginska's testimony also misconstrues the prior art, implying that the audio switch from binaural to stereo or mono disclosed in Sauk's Selective Relevance Mode would alert the user, despite that the Selective Relevance Mode relies on a user's preselection of the audio format and thus does not alert the user to anything the user has not already selected. Dr. Roginska's testimony at paragraph

36 that "Sauk discloses that the dimensionality of the audio makes the user perceive the sounds differently" mischaracterizes the Selective Relevance Mode described in Sauk, which provides that the user preselects the relevance of audio and, according to the user's preselection, the user receives different audio (e.g., stereo for audio that the user has selected as less relevant). Thus, as established above, the audio switch in Sauk from binaural to stereo or mono does not alert the user of anything.

Dr. Roginska makes similar mischaracterizations of Sauk's Selective Relevance Mode—namely that Sauk discloses the change in audio format is dictated by the audio becoming less relevant, instead of Sauk's actual disclosure that the user first determines relevancy, which then dictates the audio format—in other paragraphs that should also be excluded on the same basis. For example, ¶47: "a POSA would not rigidly apply Sauk to Clement such that a user would have to select the dimensionality of the audio, and therefore in the Clement-Osman-Sauk combination, Sauk's disclosure of user selection does not appear to be relevant to the patentability of the claims." To the contrary, Sauk's disclosure of user selection is relevant to the claims, as recognized by the Board. Decision, 16-17 ("Petitioner incorrectly asserts that 'Sauk teaches changing from binaural to stereo or monophonic sound to signal 'relevancy or importance,' such as warning of a 'hazard.'").

¶39: "On top of the binaural alert that the user is heading toward an obstacle, a POSA would have been motivated "to provide an additional audible indication" by way of "degrading the binaural [audio]'" from the environment as it becomes less relevant."

¶41: "To the contrary a POSA would have been motivated to apply that teaching to Clement and Osman—binaural alerts when the user is approaching a hazard such as an obstacle. Ex.1003 ¶¶ 111-13, 175. Though the fact that the user is leaving the environment is relevant, a POSA would have understood that the audio from the environment—or from the image in the environment—becomes less important or relevant as the user transitions out of the environment and/or approaches a hazard. Therefore, the POSA would have been motivated to apply Sauk's teachings about relevance to that audio and degrade it to a mono or stereo dimensionality. It would make no sense to add directionality to the sound from the image in the environment as the user exits the environment and approaches a hazard that could be from a direction that's different than the image, as there is no danger coming from the image. In other words, the user is leaving the image, not approaching the image." *See also* ¶¶42; 102.

As shown above, Sauk's Selective Relevance Mode requires the user to pre-select the relevance of certain sounds and, based on the user's pre-selection, sounds that are selected to be less relevant are presented in mono or stereo. In addition, as

shown above, the claim language says nothing about "additional layers of warning," as Dr. Roginska's testimony suggests. As a result, these paragraphs fail to include all related parts "that in fairness ought to be considered at the same time" under FRE 106, is not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a) and should be excluded under FRE 401, 402, and 403.

2. Mischaracterization of disclosure in specification and Lyren

As with Dr. Roginska's Declaration, her Supplemental Declaration also contains testimony that mischaracterizes the disclosure of the '184 patent specification (i.e., '140 Application (Ex. 1028)) by failing to include all related parts "that in fairness ought to be considered at the same time" under FRE 106, is not based on "sufficient facts or data" in violation of FRE 702(b) and 37 C.F.R. § 42.65(a) and should be excluded under FRE 401, 402, and 403.

Dr. Roginska's testimony at paragraph 82 that "Nor is there any reason why a POSA would have understood the '140 Application to be teaching modifying Figure 6 to apply to visually immersive environments" ignores the clear disclosure of the '140 Application that provides "Examples herein can take place in physical spaces, in computer rendered spaces (VR), in partially computer rendered spaces (AR), and in combinations thereof." Ex. 1028, 168:15-16. Similar testimony in other paragraphs suffers from the same deficiency:

¶81: "None of these, or similar questions, are addressed or considered in the '140 Application, and therefore a POSA would not have understood the '140 Application to disclose warning the user that it is leaving an immersive virtual environment."

¶107: "For example, a POSA would not have understood such language to be explicit disclosure that a WED is used in every embodiment—instead this catch-all language discloses that the methods/blocks can be performed in a variety of ways, and does not show written description support because the embodiments of, e.g., Alice entering a car, clearly do not and would not use a WED." "A POSA would not have had any reason to modify these embodiments to add a virtual image as Alice, e.g., walks around outside. But even if this embodiment were modified to substitute the HPED for a WED/HMD, the act of Alice getting into the car would not constitute her leaving an environment that includes virtual images."

And in paragraph 85, Dr. Roginska's testimony fails to provide any "underlying facts or data" to support her opinion that "A POSA would understand that a change in the ability to detect position in a physical environment implies that the user is still in the environment and not leaving it." Thus, this paragraph should be excluded.

3. Failure to consider Dr. Begault's testimony

Dr. Roginska's testimony includes several statements regarding Dr. Begault's interpretation of claim terms and his prior art research papers. *See* ¶¶ 17, 18, 23, 29, 30. For example, in paragraph 17, Dr. Roginska states ""Dr. Begault's interpretation of 'environment' contradicts other interpretations of 'environment' he provides." This testimony—including in paragraphs 18, 23, 29, and 30—ignores Dr. Begault's testimony in his declarations and deposition and thus should be excluded under FRE 106, 401, 402, 403.

Dr. Roginska misquotes Dr. Begault's declaration at paragraph 52: "Dr. Begault asserts that Sauk alone or "in combination with Osman and Clement disclose a method of alerting/warning the user by removing/degrading the binaural sound received by the user (claims 8, 10, 15-19 of the '184 Patent)." Dr. Begault's declaration actually says "Neither Sauk nor Sauk in combination with Osman and Clement disclose a method of alerting/warning the user by removing/degrading the binaural sound received by the user (claims 8, 10, 15-19 of the '184 Patent)." Ex. 2012 paragraph 100 (emphasis added). Thus, paragraph 52 should be excluded under FRE 106, 401, 402, 403.

Dr. Roginska also ignores Dr. Begault's testimony in his declaration and deposition regarding the examples in the specification of the '179 and '184 patents providing written support. Dr. Roginska opines at paragraph 68 that "However,

none of these examples provide written description support for the claims, and Dr. Begault does not even assert that they do," citing pages 20-24 of Ex. 2012. Dr. Roginska ignores Dr. Begault's testimony in his declaration and deposition where he clearly relies on the information in the two tables mentioned to provide written description support for the claims. *See, e.g.*, Ex. 2012, ¶30; *see also id.*, ¶¶48-62. Thus, paragraph 68 should be excluded under FRE 106, 401, 402, 403.

At paragraph 77, Dr. Roginska states that "I note that Dr. Begault said the opposite in his deposition, explaining that not every alteration of binaural sound is an alert (Ex.1147 86:22-87:5) and therefore it cannot be inherent." This statement could be interpreted to suggest that Dr. Begault said in his deposition that the disclosure "cannot be inherent." He made no such statement. Thus, paragraph 77 should be excluded under FRE 106, 401, 402, 403.

Dr. Roginska mischaracterizes two references Pedrotti and Donner, neither of which is relied upon in the Petition, regarding trackers to determine position and orientation of the user. Ex. 1148, ¶99. Both Pedrotti and Donner, however, rely on external components to determine the position and orientation of the headset. *See, e.g.,* Ex. 1080, 4:49-54 (Pedrotti disclosing use of an electromagnetic field generated from a component external to the HMD); Ex. 1150, [0013], [0018] (Donner disclosing reliance on a reference coordinate frame or "world space"). Thus paragraph 99 should be excluded under FRE 106, 401, 402, 403.

II. CONCLUSION

For the reasons above, the challenged evidence—paragraphs 30, 111-15, 175, 183, 251, 267, 312, 313, 317, and 360 of Exhibit 1003 and paragraphs 17, 18, 23, 29, 30, 36-39, 41, 47, 52, 68, 77, 81, 85, 99, and 107 of Exhibit 1146—does not meet the threshold for admissibility and should be excluded from the record.

Date: August 16, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §42.6(e), the undersigned hereby certifies that the above-captioned Patent Owner's Motion to Exclude was served via electronic mail, as authorized by Petitioner's Mandatory Notices, on August 16, 2024 at the following email correspondence addresses of record:

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