

Filed on behalf of: Meta Platforms, Inc.

Filed: October 28, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.
Petitioner,

v.

EIGHT KHZ, LLC
Patent Owner.

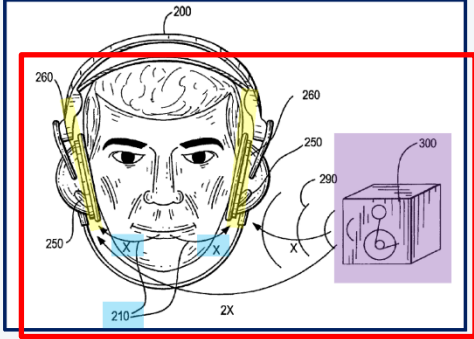
Case No. IPR2023-01003
U.S. Patent No. 9,226,090

**PETITIONER'S OBJECTIONS TO
PATENT OWNER'S DEMONSTRATIVE EXHIBITS
FOR ORAL ARGUMENT**

I. OBJECTIONS TO PATENT OWNER'S DEMONSTRATIVES

Pursuant to the Board's September 10, 2024 Order (IPR2023-01003 Paper 39), Petitioner Meta Platforms, Inc. ("Meta" or "Petitioner") submits the following objections to Patent Owner's demonstratives for use at the oral argument scheduled for October 29, 2024. Petitioner placed a red box over the objectionable material on each slide.

Slide No.	Objection
27	Petitioner objects to the citation of highlighted text from EX2011, 59 and corresponding color coded elements of claim 15 as new evidence that was not the subject of any of arguments in any paper of record. PHOSITA: Claim 15 Requires Synthesis 15. A computer system, comprising: a first wearable electronic device that a first person wears; a second wearable electronic device that a second person wears and that captures a binaural voice of the second person during an electronic phone call with the first wearable electronic device that the first person wears; a memory that stores instructions; and a processor that executes the instructions to adjust the binaural voice of the second person during the electronic phone call in order to position a sound localization point of the binaural voice to a location that is away from and proximate to the first person, wherein the sound localization point represents an origin of the binaural voice of the second person to the first person. Ex. 1001, 44:58-45:4  DURAND RENÉ BEGAULT, Ph.D. Advanced Controls and Displays Group Human Factors Research and Technology Division NASA Ames Research Center 59. Claim 15 of the '090 refers to an "wearable electronic device". While this independent claim does not specify the location of the microphones other than to state that they are "binaural", the specification states "Examples of the wearable electronic device with microphones include, but are not limited to, earpieces, headphones, earphones, electronic glasses, hearing aids, and electronic devices that fit into or near the ear". Ex. 1001, 25:5-9. Claim 15, like claim 1, therefore refers either to a two-channel headphone with two microphones mounted near the head to capture the binaural speech of a talker. Ex. 2011, ¶59 Reply, 3 n.3 (citing Ex. 2011, ¶59) DEMONSTRATIVE EXHIBIT – NOT EVIDENCE 27
81	Petitioner objects to the colored annotations of FIG. 10 and corresponding text providing an association as new evidence and argument that were not the subject of any paper of record.

	Additionally, Andrea's Second Mic is for Noise Cancellation the microphones. From the centered position of the mouth, the voice signal 210 will look like a plain wave and arrive in-phase at same time with equal amplitude at both the microphones, while noise from the sides will arrive at each microphone in different phase/time and be cancelled by the adaptive processing of the algorithm. Illustration of such an instance is clearly shown in FIG. 10, for example, where noise coming from a speaker 300 on one side of the user is cancelled due to varying distances (X, 2X) of the sound waves 290 from either microphone 250. However, the voice signal 210 travels an equidistant (Y) to both microphones 250, thus providing for a high fidelity far field noise canceling microphone that possesses good background noise cancellation and that may be used in any type of noisy environment, especially in environments where a lot of music and speech may be present as background noise (as in a game arena or internet cafe).  Ex.1007, 11:6-24 POR, 51 (citing Ex.1007, 11:6-24; Fig. 10) 81 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE
100	Petitioner objects to the citation as new evidence that was not the subject of any arguments in any paper of record. Petitioner's Expert: Claim 8 Sound is Synthesized Limitation 8[B] designate, for the first individual, a sound localization point that simulates a location in empty space from where an origin of a voice of the second individual occurs for the first individual through the electronic earphone such that the sound localization point in empty space is located away from and proximate to the first individual; Q It is external, right? MS. WANG: Asked and answered. Q It is external, correct? MS. WANG: Asked and answered. A According to Eight KHz, that is the definition I used in my -- in my report. Q And the sound originates externally from the listener, correct? A The sound appears to the listener. There is no actual sound, right? It is in that room. The sound is synthesized. It appears to the listener to be away from and proximate. Q Which is external to the user, correct? MS. WANG: Asked and answered. A Using that definition from Eight KHz, yes. Ex.2016, 193:5-19 POR, 43-44 (citing Ex.2016, 193:5-19); POR, 45 100 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE
105	Petitioner objects to the citation of the transcript at 196:14-18 as new evidence that was not the subject of any arguments in any paper of record.

	“Origin of the Voice” in Claim 8 is Located Externally Petitioner Expert CANNOT Name “Other Things” Limitation 8[B] designate, for the first individual, a sound localization point that simulates a location in empty space from where an origin of a voice of the second individual occurs for the first individual through the electronic earphone such that the sound localization point in empty space is located away from and proximate to the first individual; Q Okay. So it is not stereophonic sound, but it could be binaural sound? A It could be binaural or other things as well. Q I'm sorry, did you say interaural? A No, it could be binaural or it could be other things as well. Q What other things? A I don't know if they have a name. I know there are processes that you do, you can process signals, so that when they arrive at your ears, externalize the sound without being binaural. POR 45 (citing Ex.2016, 196:19-197:10) Ex.2016, 196:19-197:10 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE 105
148	Petitioner objects to EX1005, 6:15-17 as not cited in the portion of EX2011, ¶49 that is identified in POR 20 to support the arguments, as new evidence that was not the subject of any arguments in any paper of record. Bedingfield's Third Delay is NOT ITD participants. In some embodiments, the change volume at the block 316 may also include equalization controls (e.g., bass and treble, and more complex characteristics controls), digital delay controls, echo controls, and other audio controls to adjust the sound output of all of the participants. Ex.1005, 6:15-17  DURAND RENE BEGAULT, Ph.D. Advanced Controls and Displays Group Human Factors Research and Technology Division NASA Ames Research Center These types of processors are commonly used by musicians and recording engineers to create special dramatic effects or to simulate room reverberation or outdoor environments (e.g., an echo from a canyon), including in multi-channel loudspeaker playback. A POSITA would not imagine such devices as being capable of simulation of ITDs using microsecond interaural time differences that are captured only in a calibrated HRTF measurement in a laboratory. POR 20 (citing Ex.2011, ¶49 (citing Ex.1005, 6:15-17)) Ex.2011, ¶49 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE 148
157	Petitioner objects to quoted text from IPR2023-01004, Paper 14, 4 as new evidence that was not addressed in any paper of record.

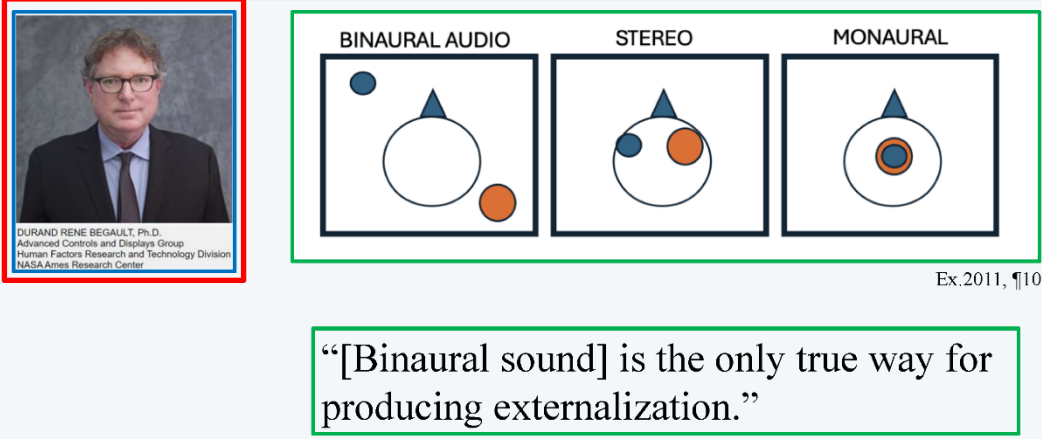
	Petitioner's Attempt to Distinguish Between Recorded and Pre-Recorded in Li Fails  PO further counters that "Li consistently uses 'recorded' or 'recordings' to describe recorded sound playing back at a later time—not in real-time." POR 26. But as both the '090 Patent and Dr. Begault confirm, the plain meaning of "record" covers both live and non-live sounds.⁷ The '090 Patent repeatedly uses the term Further, even if Petitioner's new argument was proper, we disagree that Li always distinguishes between the terms "recording"/"recorded" as referring to "sound captured and transmitted in real-time" and "pre-recording"/"pre-recorded" as "sound that has been stored and later played back." See Req. Reh'g 1, 4. For example, Li discloses that "sound Reply, 27, Sur-Reply, 26-27 (citing IPR2023-01004, Paper 14, 5-6) IPR2023-01004, Paper 14, 5-6 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE 157
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II. SPECIFIC OBJECTIONS TO NEW IMAGES

Petitioner objects to the image of Durand Rene Begault in Patent Owner's demonstrative slides listed below as new evidence that was not the subject of any of PO's arguments in any paper of record. *See St. Jude Med., Cardiology Div., Inc. v. The Bd. of Regents of the Univ. of Mich.*, IPR2013-00041, Paper 65 at 2-3 (PTAB Jan. 27, 2014) (explaining that "new" evidence includes evidence already of record but not previously discussed in any paper of record); *see also* CTPG 85.

Petitioner objects to Slide 9 which includes for the first time the image of Durand Rene Begault. Petitioner placed a red box over the objectionable material on each slide. Petitioner repeats the objection for the same image of Durand Rene Begault on Slides 22, 27-29, 42, 46-48, 67, 69-71, 73-74, 82, 85, 91-92, 94, 99, 104, 108-110, 117, 119-120, 126, 139, 142-143, 148, 153, 164-166. Given the volume,

Petitioner does not reproduce each slide below for efficiency of the record.

Slide No.	Objected Slide
9	“A Listener Can Localize” the Binaural Sound  Ex.2011, ¶10 “[Binaural sound] is the only true way for producing externalization.” POR, 43 (citing Ex.2011, ¶22) POR, 46 n.13 (citing Ex.2011, ¶10); POR, 42 (citing Ex.2011, ¶¶9- 22); POR, 43 (citing Ex.2011, ¶22) DEMONSTRATIVE EXHIBIT – NOT EVIDENCE 9
	Slides 22, 27-29, 42, 46-48, 67, 69-71, 73-74, 82, 85, 91-92, 94, 99, 104, 108-110, 117, 119-120, 126, 139, 142-143, 148, 153, 164-166 omitted for brevity.

Date: October 28, 2024

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CERTIFICATE OF SERVICE

The undersigned certifies that a true and correct copy of **Petitioner's Objections to Patent Owner's Demonstrative Exhibits for Oral Argument** was served via electronic email on Patent Owner's counsel of record listed below, pursuant to its Mandatory Notices, on October 28, 2024:

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