

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,

Petitioner,

v.

JAWBONE INNOVATIONS, LLC,

Patent Owner.

Patent No. 10,779,080

Filing Date: July 22, 2013

Issue Date: September 15, 2020

Inventor: Gregory C. Burnett

Title: DUAL OMNIDIRECTIONAL MICROPHONE ARRAY (DOMA)

PATENT OWNER'S PRELIMINARY SUR-REPLY

Case No. IPR2024-00350

EXHIBIT LIST

Exhibit No.	Description of Document
2001	Declaration of Akbar M. Sayeed, Ph.D.
2002	Curriculum Vitae of Akbar M. Sayeed, Ph.D.
2003	Excerpts of MICROPHONE ARRAYS: SIGNAL PROCESSING TECHNIQUES AND APPLICATIONS, Ch. 18, Future Directions in Microphone Array Processing (Michael Brandstein & Darren Ward eds., Springer-Verlag 2001) (“Brandstein”)

Petitioner attempts to distinguish the arguments made in the Petition from those it submitted in the denied IPR2023-01130 Petition (“-01130 Petition”) based on differences in (1) the claims, (2) prior art combinations, and (3) experts.

First, Petitioner admits that the relevant portions of claim 1 of the ’357 Patent and claim 1 of the ’080 Patent are identical. *See Reply* at 2-3. The relevant portions of the independent claims 7 and 14 of the ’080 Patent are largely similar to claim 1 of the ’357 Patent:

’357 Patent, Claim 1	’080 Patent, Claim 7
“a first virtual microphone comprising a first combination of a first microphone signal and a second microphone signal, wherein the first microphone signal is generated by a first physical microphone and the second microphone signal is generated by a second physical microphone . . . wherein the first virtual microphone and the second virtual microphone are distinct virtual directional microphones with substantially similar responses to noise and substantially dissimilar responses to speech”	“a first virtual microphone formed from a first combination of a first microphone signal and a second microphone signal, wherein the first microphone signal is generated by a first physical microphone and the second microphone signal is generated by a second physical microphone . . . wherein the second linear response to noise is substantially similar to the first linear response to noise and the second linear response to noise being non-zero in a direction toward a source of noise, and the second linear response to speech is substantially dissimilar to the first linear response to speech”

Petitioner belatedly relies on the “linear” limitation in the ’080 Patent, but the Petition does not address “linear” other than to recite it. *Pet.*, 33-34. Moreover, with respect to “similar,” Petitioner copies *the exact argument* from the -01130. *Pet.*, 45 (“The deep null reflects that subtracting the two virtual microphones cancels the

interference, confirming that the virtual microphones' responses to the interference are essentially the same"); -01130 Petition, 30 (same) (P.T.A.B. Dec. 20, 2023).

Petitioner relies on the same disclosures of Brandstein the Board already rejected in denying the -01130 Petition. *See* Paper 8 at 1-3 ("Likewise, Figure 5.3 of Brandstein also refutes Petitioner's assertion the virtual microphone noise responses are substantially similar."). Reliance on Figures 5.1, 5.2, and 5.3 of Brandstein "does not lead to an inference that the individual microphone responses have similar responses to noise." -01130, Paper 10 at 24-25 (P.T.A.B. Dec. 28, 2023). In its decision denying rehearing, the Board noted that "[a]s Patent Owner's declarant correctly observes: Figure 5.2 shows the overall directivity . . . , not the directivity of either virtual microphone. . . . [Figure 5.2] reflects the overall result of the system in attenuating noise." -01130, Paper 12 at 6 (P.T.A.B. Feb. 22, 2024). Nonetheless, Petitioner's arguments are contradicted by the teachings of Brandstein. Paper 8 at 14-18.

On Reply, Petitioner points to Fig. 5.3 of Brandstein as evidence "that Brandstein discloses linear response that are *substantially* similar." However, the Petition never argues that the red interference line is relevant to "substantially similar" limitation and Petitioner raises such arguments for the first time on Reply. Reply at 3-4. As explained in Patent Owner's Preliminary Response, Petitioner's discussion of Figure 5.3 is in reference to noise, not noise response, and any such

arguments are contradicted by the disclosures of Brandstein itself. Paper 8 at 17-18 (“Brandstein’s disclosed gain chart would directly contradict it.”).

Second, the presence or absence of other references in the -01130 grounds is irrelevant because Petitioner (both here and in -01130) relies *only* on Brandstein for the similar/dissimilar limitation. Pet., 32-34. The Board’s holding that “the record does not support Petitioner’s assertion that **Brandstein** teaches or suggests the independent claim requirement, ‘wherein the first virtual microphone and the second virtual microphone are distinct virtual directional microphones with substantially similar responses to noise’” is thus equally applicable here. -01130, Paper 10 at 24 (emphasis added); *see also id.* at 24-25 (“Figure 5.3 of Brandstein also refutes Petitioner’s assertion the virtual microphone noise responses are substantially similar.”). Accordingly, Petitioner’s assertion that the Petition relies on different prior art combinations is irrelevant for the critical limitations.

The inclusion of Fig. 5.3 is also irrelevant. In the -01130 proceeding, Meta argued that the “substantially similar . . . response[s] to noise” was rendered obvious by Brandstein’s Fig. 5.2. The Board rejected that argument, finding that the overall directivity depicted in Fig. 5.2 does not disclose the response of any component virtual microphone, and because other disclosure, *including Fig. 5.3*, “refutes Petitioner’s assertion [that] the virtual microphone noise responses are substantially similar.” -01130, Paper 10 at 24 (emphasis added). Accordingly, the Board’s

Decision contemplated the disclosures of Figure 5.3 of Brandstein.

Petitioner's argument that its multiple mappings for the second virtual microphone limitation were not addressed is incorrect. Petitioner addressed that Brandstein merely discloses that noise in the FBF is attenuated compared to the BM, and any discussion by Petitioner in reference to the BM is limited to noise, not noise response. Paper 8 at 17-18. As stated by the Board, reliance on Figures 5.1, 5.2, and 5.3 of Brandstein "does not lead to an inference that the individual microphone responses have similar responses to noise." -01130, Paper 10 at 24-25.

Lastly, Petitioner alleges that its use of different experts renders the Intervening Decision irrelevant. Dr. Johnson's arguments regarding the "linear responses to noise of the two virtual microphones are substantially similar" have already been addressed above and as discussed, have already been assessed by the Board in denying institution of the -01130 Petition. Aside from an alleged motivation to combine, Dr. Johnson submits identical statements to Dr. Stern in the -01130 Petition.¹ Accordingly, Petitioner's use of a different expert does not preclude relying on the Intervening Decision in denying institution here.

Because the Board's Decision in the -01130 Petition contemplated the same

¹ Dr. Johnson makes a reference to the GJBF-CAN (Ex. 1003, ¶ 105), but Petitioner does not rely on it in the Petition.

arguments made by Petitioner here, Petitioner's attempt to distinguish the Petitions based on "different" claims are unpersuasive. In addition, Petitioner's reliance on the Brandstein reference alone or in combination with McCowan and other references, where the -01130 Petition relied on Brandstein and McCowan in addition to two references buttresses Patent Owner's arguments and the Board's Decision. The reliance on a different expert does not remedy those deficiencies. Because Meta's arguments regarding Brandstein are the same arguments raised in the -01130 Petition, institution of this Petition should be denied for the same reasons.

Respectfully submitted,

Dated: April 30 , 2024

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CERTIFICATE OF SERVICE

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