

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

EIGHT KHZ, LLC,
Patent Owner.

IPR2023-01004
Patent 9,282,196 B1

Before JUSTIN T. ARBES, LYNNE H. BROWNE, and
SCOTT RAEVSKY, *Administrative Patent Judges*.

ARBES, *Administrative Patent Judge*.

DECISION
Denying Petitioner's Request on Rehearing of
Decision Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.71(d)

I. INTRODUCTION

Petitioner filed a Request for Rehearing (Paper 10, "Req. Reh'g") of our Decision (Paper 9, "Dec.") not to institute an *inter partes* review of claims 1, 4–6, 8–11, 14, 15, and 17–19 of U.S. Patent No. 9,282,196 B1 (Ex. 1001, "the '196 patent"). With our authorization, Patent Owner filed an Opposition (Paper 11, "Opp.") to the Request for Rehearing. For the reasons stated below, Petitioner's Request for Rehearing is *denied*.

II. STANDARD OF REVIEW

When rehearing a decision on petition, the Board will review the decision for an abuse of discretion. 37 C.F.R. § 42.71(c). “An abuse of discretion occurs if a decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if the decision represents an unreasonable judgment in weighing relevant factors.” *Arnold P’ship v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004). The party requesting rehearing bears the burden of showing an abuse of discretion, and “[t]he request must specifically identify all matters the party believes the Board misapprehended or overlooked.” 37 C.F.R. § 42.71(d).

III. ANALYSIS

In its Petition (Paper 1, “Pet.”), Petitioner asserted grounds of unpatentability based on two main references, Li (Ex. 1006) and Bedingfield (Ex. 1005). Dec. 8–9. We determined that Petitioner had not shown sufficiently that the references teach or suggest certain limitations of independent claims 1, 8, and 15, and thus had not established a reasonable likelihood of showing that the claims are unpatentable under 35 U.S.C. § 103 based on either reference. *Id.* at 13–31. Petitioner argues in its Request for Rehearing that we misapprehended the teachings of Li and Bedingfield. Req. Reh’g 4–15. We address each reference in turn and primarily refer to the language of claim 1, as the parties do in their papers.

A. *Li*

In the Decision, we determined that Petitioner had not shown sufficiently that Li teaches or suggests a “voice exchange between [a] computer program and [a] user,” or moving a sound localization point

(SLP) of the voice of a computer program during a “voice exchange,” as recited in limitations 1[pre], 1[a], 1[c], and 1[d].¹ Dec. 17–24. We noted that Petitioner and its declarant, Chris Kyriakakis, Ph.D., relied on a single sentence in Li discussing a “conference call.” *Id.* at 20–22 (citing Ex. 1006, col. 22, ll. 1–5; Pet. 24). We found that the Petition included insufficient explanation “as to how a voice *exchange* would occur during such a ‘conference call’ when modified to use the processed voice of a speaker.”² *Id.* at 22. Further, we agreed with Patent Owner, among other points, that “[n]one of the examples in Li includes moving a voice during a voice exchange” and Li at most suggests moving the SLP of a voice “only prior to rendering”; “once rendered, Li does not disclose that its users may reconfigure *during their voice exchange* with other speaking users.” *Id.* at 22–24 (quoting Paper 6, 26–30).

Petitioner argues that we “erroneously conflate[d] Li’s reference to ‘recording’ with ‘pre-recording,’” where Li instead “treats each differently,”

¹ As explained in the Decision, Patent Owner also argued that Li does not teach or suggest a “voice of a computer program,” as recited in the challenged independent claims, but we did not need to address those arguments given the deficiencies with respect to the recited “voice exchange.” *See* Dec. 20 n.1.

² We noted that “it is unclear from the Petition exactly what modification Petitioner is proposing an ordinarily skilled artisan would have made to Li,” as Petitioner appeared to advance two different theories: (1) “changing the conference call ‘embodiment’ to include processed voice of a speaking user as described elsewhere in Li,” or (2) “changing it to use text-to-speech computer synthesized voice rather than the actual voices of the participants.” Dec. 17–18. We addressed both in the Decision. *Id.* at 20–22. Petitioner makes clear in its Request for Rehearing that it is only relying on the first theory, and referred to text-to-speech computer synthesized voice merely to support a “motivation to modify Li.” Req. Reh’g 7 n.1.

describing “a ‘recording’ as sound captured and transmitted in real-time from a microphone array system, and a ‘pre-recording’ as sound that has been stored and later played back.” Req. Reh’g 4; *see also id.* at 1 (“Li distinguishes ‘recorded’ (meaning real-time sound tracks) from ‘pre-recorded’ (meaning sound tracks that are stored and are played back at a later time) and describes them in separate, alternative embodiments.”). According to Petitioner, “Li consistently distinguished between the transmission of a person’s voice recording and a pre-recorded sound track.” *Id.* at 5–6. Petitioner further contends that “Li’s express teaching to use its configurable 3D sound system during a conference call confirms that Li used ‘recording’ to encompass real-time transmission.” *Id.* at 6–7.

We could not have overlooked an argument not made previously. Petitioner did not argue any distinction between the terms in the Petition, nor did it argue that “recording”/“recorded” refers to sound captured and transmitted in real-time. *See* 37 C.F.R. § 42.71(d) (a request for rehearing “must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed”). Indeed, the term “real-time” does not appear in the Petition or Dr. Kyriakakis’s declaration. And the alleged excerpts of Li cited as support in the Request for Rehearing were not relied on in the Petition for the relevant claim limitations. *See* Req. Reh’g 5–6 (citing Ex. 1006, col. 4, ll. 64–67, col. 5, ll. 12–30, 39–46, col. 35, ll. 7–8); Pet. 18–29.

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 tracks *recorded* by the microphone array system 902 are *stored* in a memory or a storage device.” Ex. 1006, col. 17, ll. 20–22 (emphasis added).

Similarly, when describing the “reconstruction” (i.e., play back) of a music concert, as discussed in the Decision, Li discloses that the user uses the 3D sound processing application to arrange four musical instruments “to experience the 3D sound *recording* of a regular concert.” *Id.* at col. 20, l. 53–col. 21, l. 2 (emphasis added), Fig. 17; *see* Dec. 16–17, 22–23. Patent Owner points to other examples of “recording”/“recorded” being used to refer to sound that is stored and later played back as well. *See* Opp. 7–8.

Next, Petitioner cites in its Request for Rehearing a statement in Li that the head-related transfer functions (HRTFs) computed by Li’s 3D sound processing application “can also be used in the gaming industry to compute 3D sound *in real time*.” *See* Ex. 1006, col. 35, ll. 4–8 (emphasis added); Req. Reh’g 6. This also is a new argument that could not have been misapprehended, as the sentence was not cited in the Petition for the “voice exchange” limitations. Regardless, the sentence appears in a lengthy paragraph at the end of Li’s written description and is followed by a statement that the disclosed system “can be utilized in different fields and source formats, which provide a user with the ability to *reconstruct* his or her own virtual audio reality with corresponding audio and music binaural effects.” *See* Ex. 1006, col. 34, l. 52–col. 35, l. 12 (emphasis added); Opp. 8–9. Read in context, we are not persuaded that the single, isolated reference to “in real time” means that Li’s other references to “recording”/“recorded” are to sound being captured and transmitted in real-time as Petitioner contends (as opposed to sound being stored and later played back). Further, to the extent Petitioner attempts to tie the “in real

time” disclosure (not relied on in the Petition) to Li’s limited description of a “conference call” (relied on in the Petition), we note that the two disclosures are separated by 13 pages and are not described as such in the reference. *See* Ex. 1006, col. 21, l. 57–col. 22, l. 5, col. 35, ll. 4–8; Req. Reh’g 6–7; Opp. 9–10. Again, as explained in the Decision, Li mentions a “conference call” only in one very brief portion, while describing in detail the recording of sound tracks that can be configured and played back, and there was insufficient explanation in the Petition of “how a voice *exchange* would occur during such a ‘conference call’ when modified to use the processed voice of a speaker.” *See* Dec. 21–22. We are not persuaded that we misapprehended or overlooked any argument in the Petition in reaching that conclusion.

Turning to limitation 1[c] reciting moving the SLP of the voice of a computer program during a “voice exchange,” Petitioner argues that our analysis was “contrary to one of the very problems that Li was trying to solve.” Req. Reh’g 8. Specifically, Petitioner contends that Li “expressly addressed the need to adjust the binaural sound location *during reproduction*,” pointing to Li’s statement that “[i]n existing technology, . . . the recorded binaural sound cannot be modified or configured *during reproduction*.” *Id.* at 8–9 (quoting Ex. 1006, col. 2, ll. 36–45). Again relying on Li’s limited “in real time” and “conference call” disclosures, and citing other portions of the Petition and testimony from Dr. Kyriakakis, Petitioner argues that Li thus “allows users to move sound sources by dynamically processing the recorded sound in real-time.” *Id.* at 9–10.

We are not persuaded of error. Patent Owner correctly reasons that configuration of “recorded” binaural sound logically “must happen during reproduction, that is, after the sound is first recorded.” *See* Opp. 10–11.

That understanding is amply supported by the disclosure of Li. *See, e.g.*, Ex. 1006, col. 7, ll. 33–37 (“The configurable 3D sound system disclosed herein allows individual users to record and reproduce 3D sound for playback . . .”), col. 18, ll. 16–20 (“The 3D sound processing application records both audio and spatial information such that the recorded sound can be processed and reproduced to 3D sound.”). We also disagree with Petitioner’s arguments premised on Li’s “in real time” and “conference call” disclosures for the reasons explained above, and are not persuaded by Petitioner’s other citations because Petitioner does not explain how we allegedly erred in evaluating the arguments and testimony. *See* Req. Reh’g 9–10.

We are not persuaded that we misapprehended or overlooked any argument in the Petition that Li teaches or suggests a “voice exchange” between a computer program and user, or moving the SLP of the voice of a computer program during a “voice exchange,” as claimed.

B. Bedingfield

In the Decision, we determined that Petitioner had not shown sufficiently that Bedingfield teaches or suggests “providing . . . binaural sound,” as recited in limitations 1[a] and 1[d].³ Dec. 28–31. Petitioner argued in the Petition that “[b]y rendering a sound field and providing synthetic audio placement using both ears, Bedingfield provid[es] binaural

³ Similar to the asserted ground based on Li, Patent Owner also argued that Bedingfield does not teach or suggest a “voice of a computer program” or “voice exchange between [a] computer program and a user,” as recited in the challenged independent claims, but we did not need to address those arguments given the deficiency with respect to providing binaural sound. *See* Dec. 31 n.4.

sound to the user/person.” *Id.* at 28 (quoting Pet. 58). We found that argument insufficient, explaining that (1) Petitioner had argued in a related proceeding (IPR2023-01003) that Bedingfield does not teach capturing binaural sound; (2) “Bedingfield does not use the term ‘binaural sound’ and Petitioner [did] not point to any other language in the reference that could be equated with, or suggest, providing binaural sound”; and (3) Petitioner had not shown that Bedingfield teaches either of the two ways for creating binaural sound described by Dr. Kyriakakis, and did not “explain in any detail *how* Bedingfield allegedly teaches or suggests ‘binaural sound’ provided to the listener who is communicating with other participants on a conference call.” *Id.* at 29–31.

Petitioner makes two arguments on rehearing. First, Petitioner contends that we “incorrectly require[d] Bedingfield to disclose capturing binaural sound or HRTFs to meet the *providing binaural sound* limitation.” Req. Reh’g 10. Citing portions of Dr. Kyriakakis’s testimony providing an “Overview of the Technology” and describing interaural time differences (ITDs), interaural level differences (ILDs), and HRTFs, Petitioner contends that “*binaural sound* can reflect HRTFs, but also ITD, ILD, or other acoustical differences to localize sound.” *Id.* at 10–12 (citing Ex. 1003 ¶¶ 44, 46–53).

We are not persuaded that we imposed any improper requirement in the Decision; we merely evaluated the arguments and evidence of record put forth by Petitioner to determine whether Petitioner had made a sufficient showing with respect to providing binaural sound. As explained in the Decision, Dr. Kyriakakis testified that “[b]inaural sound can be created in two ways”: (1) “record[ing] binaural sound using two microphones that are spaced at the same distance as the width of a human head,” and

(2) “synthesiz[ing] binaural sound by processing non-binaural content with the left and right HRTFs of the desired placement angle and position.”

Dec. 30–31 (quoting Ex. 1003 ¶¶ 52–53). As to the former, Bedingfield contains no disclosure of recording with two microphones, Petitioner argued in IPR2023-01003 that “Bedingfield does not expressly teach capturing a binaural sound,” and Petitioner does not argue otherwise on rehearing. *Id.* at 29–30 (quoting Ex. 2010, 22). As to the latter, Petitioner never argued in its Petition that Bedingfield processes non-binaural content with left and right HRTFs. Petitioner now asserts on rehearing, though, that Bedingfield performs other types of processing (e.g., using ILDs) that allegedly result in binaural sound, but that is inconsistent with what its own declarant described as the second way of creating binaural sound. *See* Req. Reh’g 10–12; Ex. 1003 ¶ 53. Further, as Patent Owner correctly points out, “[s]imply disclosing some of the sound characteristics modified by the use of HRTFs does not necessarily mean that HRTFs were used to modify them.” *See* Opp. 14–15.

Second, Petitioner argues that “Bedingfield explains that its multi-channel audio system sends different sounds to the left and right ear of the listener to simulate the virtual positions of the participants in the sound field” and “[b]y simulating the natural acoustic differences (e.g., including volume level differences) between the left and right audio channels that are provided to both of the listener’s ears, Bedingfield is *providing binaural sound.*” Req. Reh’g 2–3, 12–13.

That is different from what was argued in the Petition, however. Petitioner’s sole argument in the Petition was that Bedingfield provides binaural sound “[b]y rendering a sound field and providing synthetic audio placement using both ears.” *See* Pet. 58; Ex. 1003 ¶ 206 (similar assertion).

Petitioner did not elaborate further or mention, for example, volume level differences between left and right audio channels. Again, Petitioner does not point to where it allegedly made its rehearing argument in the Petition, instead only citing portions of the Petition and corresponding testimony from Dr. Kyriakakis pertaining to issues other than the claim limitations reciting providing binaural sound. *See* Req. Reh’g 12–13, 15 (citing Pet. 8–10 (“Technology Overview”), 12–13 (introduction to Bedingfield), 53–57 (preamble of claim 1 reciting “mov[ing] a sound localization point (SLP) of a voice of a computer program during a voice exchange between the computer program and a user”), 62 (referring to previous arguments regarding limitation 1[a]); Ex. 1003 ¶¶ 44, 79–81, 198–209). Petitioner also discusses in its Request for Rehearing numerous excerpts from columns 3–4 of Bedingfield, none of which were relied on in the Petition. *See id.* at 13–14 (citing Ex. 1005, col. 3, ll. 35–39, 44–47, 49–54, col. 3, l. 62–col. 4, l. 12); Pet. 57–58, 62; Opp. 11–12. Rehearing is not an opportunity to supplement the record with new arguments and evidentiary support not raised earlier. We are not persuaded that we misapprehended or overlooked any argument in the Petition that Bedingfield teaches or suggests providing binaural sound.

IV. CONCLUSION

Based on the foregoing discussion, we determine that Petitioner has not carried its burden of demonstrating that we misapprehended or overlooked any matters in the Decision as required by 37 C.F.R. § 42.71(d).

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner's Request for Rehearing is *denied*.

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