

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

**PATENT OWNER'S OPPOSITION TO
PETITIONER'S REQUEST FOR REHEARING**

TABLE OF CONTENTS

	Page
I. INTRODUCTION.....	1
II. LEGAL STANDARD.....	1
III. ANALYSIS.....	2
A. The Board did not Misapprehend Li or Overlook Evidence.....	2
1. Petitioner’s “Real-Time” Theory and Its Premise are New.....	3
2. Petitioner’s “Real-Time” Theory and Its Premise are False.....	6
a. Li does not Teach “Voice Exchange,” as It does not Support Petitioner’s Definition of “Recording”	6
b. “[I]n Li no moving of a sound can happen before first recording it”.....	10
B. The Board did not Misapprehend Bedingfield or Overlook Evidence.....	11
1. Petitioner Attempts to Reargue Ground 6.....	11
2. Bedingfield does not Teach or Suggest “Binaural Sound”	12
IV. CONCLUSION.....	15

TABLE OF AUTHORITIES

	Page(s)
Federal Cases	
<i>A.C. Dispensing Equip. Inc. v. Prince Castle LLC</i> , IPR2014-00511, Paper 16 (PTAB Sept. 10, 2014).....	5
<i>ClearCorrect Operating LLC v. Align, Inc.</i> , IPR2017-01829, Paper 13 (PTAB Sep. 26, 2018).....	1
<i>Google LLC v. Makor Issues & Rights Ltd.</i> , IPR2017-00815, Paper 31 (PTAB Aug. 10, 2018).....	12, 13
<i>One World Techs., Inc. v. Chevron (HK) Ltd.</i> , PGR2020-00061, Paper 19 (PTAB Feb. 23, 2021).....	1
<i>Purdue Pharma L.P. v Depomed, Inc.</i> , IPR2014-00377, Paper 17 (PTAB Aug. 6, 2014).....	2, 3, 4

I. INTRODUCTION

Patent Owner submits this Response to Petitioner’s Request for Rehearing (Paper 10 (“RR”)) of the Decision Denying Institution of Inter Partes Review of U.S. Patent No. 9,282,196 B1 (Paper 9 (“Decision”)). The Board authorized this Response, limited to 15 pages, in its email to the parties of February 16, 2024.

Petitioner fails to meet its burden of demonstrating that the Board misapprehended or overlooked the teachings of Li (Ex. 1006) or Bedingfield (Ex. 1005) as presented in the Petition (Paper 1 (“Pet.”)), and Petitioner’s evidence and explanation of these references therein. Instead, Petitioner advances new evidence and arguments in the RR, exceeding the permitted scope of a rehearing request. Petitioner’s arguments lack substance as they rely entirely on a mischaracterization of the teachings of Li and Bedingfield, along with misleading quotes from Dr. Kyriakakis’s declaration (Ex. 1003). Petitioner’s RR should be denied.

II. LEGAL STANDARD

A request for rehearing is limited in scope; it is not an opportunity for raising new arguments or evidence, or for highlighting disagreements with the Board’s assessment of the arguments or evidence. *See ClearCorrect Operating LLC v. Align, Inc.*, IPR2017-01829, Paper 13 at 5 (PTAB Sep. 26, 2018) (citing *Cooper v. Goldfarb*, 154 F.3d 1321, 1331 (Fed. Cir. 1998)); *One World Techs., Inc. v. Chevron (HK) Ltd.*, PGR2020-00061, Paper 19 at 8-9 (PTAB Feb. 23, 2021) (“Because

Petitioner did not attempt to bring this issue to the Board’s attention prior to entering the Decision Denying Institution, we decline to consider its new arguments for the first time on rehearing.”).

III. ANALYSIS

Petitioner fails to meet its burden of demonstrating that the Board should rehear its Decision. Petitioner contends that the Board’s analysis of Independent Claims (in Grounds 1 and 6) “overlooked” several arguments that in fact were not asserted, and “misapprehended” evidence that in fact was never discussed in the Petition. Accusing the Board of abusing its discretion under these circumstances contradicts basic logic and is contrary to settled law. “It is not the Board’s role to play archeologist to uncover any additional support in the record that is not raised and discussed in the Petition. . . . In other words, we could not have overlooked or misapprehended arguments that were not raised in the Petition.” *Purdue Pharma L.P. v Depomed, Inc.*, IPR2014-00377, Paper 17 at 5-6 (PTAB Aug. 6, 2014). Petitioner’s reasons for seeking rehearing are not focused on error made by the Board; reason alone to deny the RR. Further, Petitioner’s new arguments are all wrong; they result from selecting favorable isolated passages and avoiding unfavorable language, leading to an entirely mischaracterized interpretation of the teachings of Li and Bedingfield.

A. The Board did not Misapprehend Li or Overlook Evidence

1. Petitioner’s “Real-Time” Theory and Its Premise are New

The Board correctly concluded that Petitioner did not make “a sufficient showing that Li teaches or suggests a ‘voice exchange between a computer program and a user,’ or moving a SLP of the voice of a computer program during such a ‘voice exchange.’” Decision at 20. However, in the RR, Petitioner raises new arguments for the first time. Petitioner first argues that Li discloses the “voice exchange” limitation, because Li’s conference call occurs “in real-time,” (RR at 7) and involves “real-time transmission” of a person’s voice recording. *Id.*, at 6. Petitioner next argues—again for the first time—that Li discloses moving a SLP during voice exchange, because Li allows its conference call users to “move sound sources by dynamically processing the recorded sound in real-time.” *Id.*, at 9.

First, the entirety of Petitioner’s argument relies on an arbitrary distinction that was not apparent to Petitioner before the Decision. The Board correctly concluded that Li’s embodiments “involve recording sound tracks and providing a GUI that allows the user to configure the sound that will later be played back.” Decision at 21. Petitioner argues for the first time that Li actually distinguishes between “recorded” and “pre-recorded,” relying on a sentence in Li that it never

presented to the Board.¹ RR at 1, and 4-5 (new citations to Li). Petitioner not only makes this claim but also proceeds to propose self-serving definitions for these terms—without providing reference to Li as support. *Id.*

The Petition itself did not suggest the existence of any such distinction in Li. In discussing Li’s sound sources, Petitioner enumerated only “pre-recorded” sounds alongside “musical instruments” and “a person’s voice.” *E.g.*, Pet. 17 (“Li already discloses sound generating devices and different sound sources, including musical instruments, a person’s voice and pre-recorded sounds.”); *Id.*, at 23. At no point did Petitioner use the terms “recorded” or “recording” to describe what it now defines as “real-time” sounds. RR at 4. Likewise, the terms “recorded” or “recording” were not employed in such a context by Petitioner’s expert. *See* Ex. 1003 ¶¶95, 103. It is only in the RR that Petitioner introduces three block quotations—**not previously cited in the Petition in support of Ground 1**—in support of its RR that Li distinguishes “recorded” from “pre-recorded.” RR at 5 (quoting Ex. 1006, 5:12-30; 5:39-46; 4:64-67). Even if such an understanding could have been uncovered by reading Li, it is not the Board’s responsibility “to search the record and piece

¹ Petitioner treats “recorded” and “recording” as synonyms. *Compare* RR at 1 (“Li distinguishes ‘recorded’ ... from ‘pre-recorded’) *with* RR at 4 *See* RR at 4 (“The Decision erroneously conflates Li’s reference to ‘recording’ with ‘pre-recording.’”)

together the evidence necessary to support Petitioner’s arguments,” much less one never presented. *A.C. Dispensing Equip. Inc. v. Prince Castle LLC*, IPR2014-00511, Paper 16 at 5-6 (PTAB Sept. 10, 2014). Accordingly, since the very premise of Petitioner’s “real-time” arguments was not raised and addressed in the Petition, the Board should reject them.²

Second, Petitioner concocts its “real-time” arguments by relying on a crop-quote from Li that was not presented to the Board prior to the Decision: “Li expressly confirms that its 3D sound processing application can be used ‘to compute 3D sound in real time.’” RR at 6 (citing Ex. 1006, 35:7-8). It speaks volumes that Petitioner’s 15-page RR uses the terms “real-time” or “real time” 13 times, whereas these terms were not used at all in either the Petition or Kyriakakis’s declaration. Petitioner’s new-found reliance on Li’s reference to “real time” is procedurally improper.

Third, as to the “voice exchange” limitation, Petitioner’s stance in the RR is inconsistent with that of the Petition. Petitioner merely argued that Li’s disclosure of a “conference call” inherently implies a “voice exchange.” *See* Pet. 22-23. At no

² In this particular instance, the Board considered the sentence from Li that Petitioner is now citing—despite Petitioner’s failure to present. RR at 1 (admitting the Board considered “the very same citation”); Decision at 21. When the Board quoted the exact sentence now being cited by Petitioner, the Board could not overlook it.

point in the Petition did Petitioner contend that Li's conference call embodiment teaches a "voice exchange" because it supposedly occurs in real-time. RR at 1, 4.

Fourth, regarding the "moving a SLP during the voice exchange" limitation, the Board actually had considered such evidence. For example, Petitioner relies on two passages from Li to argue for the first time, in this RR, that conference call users can move the sound in real-time and thus during the voice exchange. RR at 9-10. Petitioner cites the disclosure in Li where the user can "*dynamically move the sound sources.*" *Id.* (citing Ex. 1006, 15:44-48) (emphasis by Petitioner). But the Board actually considered this exact passage, and did not reach the same conclusion as Petitioner. Decision at 15 (citing Ex. 1006, 15:44-48). Additionally, Petitioner cites Li's disclosure about "dynamically process[ing] 705 the recorded sound tracks using the acquired user selections to generate . . . a configurable 3D binaural sound." RR at 9 (citing Ex. 1006, 15:48-51). Again, the Decision considered this passage, despite Petitioner's failure to present this citation in the Petition. *See* Decision at 15. Thus, the Board did not overlook the evidence raised in Petitioner's RR.

2. Petitioner's "Real-Time" Theory and Its Premise are False

a. Li does not Teach "Voice Exchange," as It does not Support Petitioner's Definition of "Recording"

Petitioner's new argument that Li teaches "voice exchange" engages in arbitrary line-drawing in an attempt to create an artificial distinction between Li's

uses of “recorded” and “pre-recorded.” RR at 4. Petitioner supports this artificial distinction solely by its own conclusory definitions for each term, neither of which is found in Li: “Li describes 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.” *Id.* Despite cutting this imagined distinction out of whole cloth in the RR, Petitioner faults the Board for not having considered it: “The Decision erroneously conflates Li’s reference to ‘recording’ with ‘prerecording.’ But Li treats each differently.” *Id.*, at 4. Procedurally improper and factually wrong.

As an initial matter, contrary to Petitioner’s position that only pre-recorded sounds are stored, Li discloses that even “sound tracks recorded by the microphone array system 902 are stored in a memory or a storage device.” Ex. 1006, 17:20-22. For example, Li makes it clear that after the sound recorded by “[t]he microphone array system” is “saved ... in the portable device,” “users can play the recorded audio as a 3D binaural sound.” *Id.*, 34:56-62. Li consistently uses “recorded” or “recording” to describe situations where the recorded sound is played back at a later time—not in real-time. *E.g.*, *id.*, at 1:54-55 (“When a stereo recording is played back ...”); 18:16-20 (“The 3D sound processing application records ... such that the recorded sound can be processed and reproduced [i.e., played back] to 3D sound.”); 7:33-37 (“The configurable 3D sound system ... allows individual users to record and reproduce 3D sound for playback ...”). Indeed, Li identifies the very

problem it is trying to solve: providing an option for the user to adjust the source locations of the recorded audio “during reproduction,” i.e., playback:

In existing technology, ... the recorded binaural sound cannot be modified or configured during reproduction. Although the existing technologies are able to achieve a few enhancements on the 3D spatial audio experience for a user, they do not provide an option for the user to adjust the source locations and directions of the recorded audio [during reproduction].

RR at 8 (citing Ex. 1006, at 2:36-45). Further, in discussing FIG. 17 Li explains how during “a reconstruction [i.e., play back] of a scene of a concert stage at a music concert,” the user “can arrange the position of the four musical instruments ... to experience the 3D sound recording of a regular concert.” Ex. 1006, at 20:53-21:2. This embodiment shows that, contrary to Petitioner’s new argument, Li’s “recording” does not “encompass real-time transmission” of sound. RR at 6. This example relates to a reconstruction of a scene of a concert, and the user is listening to a recorded soundtrack.

Based on this unsupported line-drawing, Petitioner then contends that Li’s reference to “comput[ing] 3D sound in real time,” “directly conflicts” with the Board’s finding that Li’s embodiments “involve recording sound tracks ... that will later be played back.” RR at 6. Not so.

First, Li's reference to "real time" is brief (only once), and thus Petitioner's reliance on this isolated portion of Li echoes its reliance on Li's "conference call" excerpt that the Board found insufficient. Decision 22, 24. **Second**, Petitioner omits crucial context regarding Li's "real time" excerpt. In a long paragraph, Li lists possible fields of use for its system including "in the gaming industry to compute 3D sound in real time." Ex. 1006, 34:52-35:12. But Li concludes that paragraph in the very next sentence after its reference to "real time" by stating that its system can be utilized in all these fields because the system "provide[s] a user with the ability to **reconstruct** his or her own virtual audio reality with corresponding audio." *Id.* Li's disclosure about real-time computation of 3D sound does not mean that the computation must use as input sound "transmitted in real-time," as Petitioner argues. RR at 4. This computation is done in real time but on a sound track that was previously recorded, consistent with Li's disclosure and all embodiments.

Petitioner also faults the Board for misapprehending Li's "conference call" example, arguing that because Li's "conference call" participants "interact in real-time," the Decision's holding that "Li can only spatialize pre-recorded sounds" is incorrect. RR at 6. But, at no point does Li indicate its conference call users interact in real-time. Petitioner reaches this conclusion by wedding together two isolated excerpts of Li, separated by 13 pages. Somehow, from Li's disclosures that its system can be "used in the gaming industry to compute 3D sound in real time," (Ex.

1006, 35:7-8), and allows for “placing different speaking users at different spots to mimic a real conference room environment,” (*Id.*, 22:3-5), Petitioner concludes that Li’s participants “interact in real-time.” This argument exhibits the same discontinuity identified by the Board in Petitioner’s case. Li’s brief mention of a “conference call” is incongruent with the broader context of Li’s disclosure of recorded soundtracks. Petitioner’s attempt in the RR to turn this discontinuity on its head and use another isolated disclosure to reimagine the rest of Li is untimely and unsupported. As the Board correctly maintained, Li’s reference to “mimic a real conference room environment,” read in context, refers to positioning processed voices of different speakers “which the remainder of Li describes as recorded in advance in sound tracks.” Decision at 22.

b. “[I]n Li no moving of a sound can happen before first recording it”

The Board correctly adopted PO’s position that “in Li no moving of a sound can happen before first recording it.” Decision at 23. Relying on its newly-minted recorded/pre-recorded distinction, Petitioner argues that this is contrary to the very problems that Li is trying to solve: “the need to adjust the binaural sound location during reproduction” RR at 8 (citing Ex. 1006, 2:36-45). But this argument proves too much: if Li enables users to reconfigure or modify “recorded binaural sound ...

during reproduction [i.e., play back],” (*Id.*), then logically any such reconfiguration and must happen during reproduction, that is, after the sound is first recorded.

Petitioner further cites passages from Li where the user “dynamically moves the sound sources” and the system “dynamically processes the recorded sound,” to conclude that “Li’s conference call embodiment allows users to move the computer-synthesized voice of a speaker to a different location in real-time during a conference call.” RR at 9-10 (emphasis added). This is just a rehash of Petitioner’s argument and its expert’s opinion that the Board correctly found conclusory and unsupported. Decision at 23-24. Read in view of Li’s overarching solution—which Petitioner characterizes as “adjust[ing] the binaural sound location during reproduction” (RR at 8)—these passages simply show that a user can move the locations of previously-recorded sound sources during their play back.

B. The Board did not Misapprehend Bedingfield or Overlook Evidence

1. Petitioner Attempts to Reargue Ground 6

Petitioner once again oversteps the bounds of a request for rehearing, identifying new evidence and raising new arguments. Petitioner extensively refers to portions of Bedingfield, most of which neither Petitioner nor its expert cited, and none of which they cited for the proposition that Bedingfield discloses binaural sound. Notably, Petitioner’s new argument pivots on a block quotation on page 13

of the RR, a passage never cited or discussed in the Petition to support the notion of binaural sound. RR at 13 (citing Ex. 1005, 3:62-4:12). Similarly, on page 14 of the RR, Petitioner introduces three citations to Bedingfield for the first time.

Moreover, Petitioner introduces an entirely new argument, departing from the argument presented in the Petition. As noted by the Board, the sole argument put forth by Petitioner for the “binaural sound” limitation was that “by rendering a sound field and providing synthetic audio placement using both ears, Bedingfield provides binaural sound.” Decision at 28 (citing Pet. 57-58). But in the RR, Petitioner presents a substantially different argument, asserting, “[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.” RR at 13. The Board correctly rejected Petitioner’s original argument, and should not entertain this second bite at the apple.

2. Bedingfield does not Teach or Suggest “Binaural Sound”

The Board correctly recognized Petitioner’s inconsistent positions vis-à-vis Bedingfield’s teaching of “binaural sound” between co-pending IPRs. *See Google LLC v. Makor Issues & Rights Ltd.*, IPR2017-00815, Paper 31, at 24 (PTAB Aug. 10, 2018) (noting a party’s failure to “explain persuasively” why it has “taken inconsistent positions between IPRs with respect to this limitation.”) Petitioner does not deny taking inconsistent positions, and does not deny that “Bedingfield

does not capture ‘binaural sound,’” (Decision at 30), because it does not “record binaural sound using two microphones.” *Id.* (citing Ex. 1003 ¶52). Yet Petitioner argues that Bedingfield still provides binaural sound despite not using HRTFs, which is the only other way to create binaural sound according to Petitioner’s own expert:

Binaural sound can be created in two ways. The first is to record binaural sound using two microphones....

The second is to synthesize binaural sound by **processing** non-binaural content **with the left and right HRTFs** of the desired placement angle and position. ... **This processing produces** a “virtual auditory space,” with **a two-channel synthetic binaural signal with the left channel sent to the listener’s left ear and the right channel to the listener’s right ear** (using headphones).

Decision at 30-31 (citing Ex. 1003 ¶52-53). Therefore, contrary to Petitioner’s mischaracterization, its own expert—not the Board—“require[d] Bedingfield to disclose capturing binaural sound or HRTFs to meet the providing binaural sound limitation.” RR at 10.

Further, Petitioner’s new theory improperly conflates binaural sound with stereo sound, which the experts agreed are different: *See* Ex. 1003 ¶45 (“A related, but different type of sound is called stereophonic. **Unlike binaural sound** which is provided over wearable telephone receivers, or headphones, **stereophonic sound is intended for playback over loudspeakers.**”); *see also* Ex. 1032, 116:4-17

(distinguishing binaural from stereo, because “[b]inaural sound usually includes some anatomical feature of the human head”). Indeed, Petitioner’s expert expressly maintained that synthesizing binaural sound necessarily results in “a two-channel synthetic binaural signal”—not a two-channel “stereo sound”—being sent to the ears of a listener. Ex. 1003 ¶53. Yet, to prove that Bedingfield discloses “providing binaural sound,” Petitioner relies on an embodiment that sends “stereo sound” to the left and right ear of the listener:

With respect to a listener equipped with a multi-channel audio communication system, the listener may focus on a first speaker located at the 12 o’clock position relative to the listener and hear the speaker in stereo sound with both the right and left audio channels delivering substantially even volume levels. The listener may hear a second speaker, located at the 3 o’clock position relative to the listener, in stereo sound with an increased volume level in the right audio channel and a decreased volume level in the left audio channel ...

RR at 13 (citing Ex. 1005, 3:62-4:12).

Petitioner’s next new argument is unclear. It appears that Petitioner suggests that because Bedingfield adjusts the audio in both ears of the listener by taking into account factors such as “ILD, relative volume, and changes in frequency,” the Board should somehow credit Bedingfield with disclosing HRTF-derived binaural sound despite its full lack of disclosure of HRTFs. RR at 12; *Id.*, at 13-14. Wrong. Simply

disclosing some of the sound characteristics modified by the use of HRTFs does not necessarily mean that HRTFs were used to modify them. Accordingly, while HRTFs “by definition will include interaural time and level differences,” (RR at 11), mere sound processing with “ILD, relative volume, and changes in frequency” cannot create binaural sound as Petitioner argues. *Id.*, at 12. To do so requires using HRTFs, as Petitioner’s expert explained. Ex. 1003 ¶53. This is because HRTFs include many factors such as “refraction, attenuation, and even the shape of the listener’s ears, head, shoulders, and torso” required for “synthesiz[ing] binaural sound.” *Id.*, at ¶¶50-51. Bedingfield does not disclose any of these factors.

PO’s expert also reached the same conclusion, opining that “[n]owhere does Bedingfield indicate the use of HRTF filtering, binaural processing, or interaural time delay.” Ex. 2007 ¶30. Dr. Begault explained that to ““synthesize binaural sound by processing non-binaural content with the left and right HRTFs,”” (*Id.*, at ¶21), requires “the outer ears (the pinnae) are either directly implemented or modeled as digital filters [i.e., HRTFs]. By filtering a digitized sound source with these filters, one can potentially place sounds anywhere in the virtual space about a headphone listener.” *Id.*

IV. CONCLUSION

For the foregoing reasons, rehearing of this *inter partes* review and institution of a trial should be denied.

Date: February 26, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a complete copy of Patent Owner's Response in Opposition to Petitioner's Request for Rehearing, and its cited exhibits, were served via electronic mail, as authorized by Petitioner's Mandatory Notices, on February 26, 2024 at the following email correspondence addresses of record:

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