UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

EIGHT KHZ, LLC,
Patent Owner.

Case IPR2023-01004
Patent 9,282,196

PATENT OWNER'S PRELIMINARY RESPONSE
35 U.S.C. §313, and 37 C.F.R. §42.107(a)

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EXHIBIT LIST

Ex.	Description
2001	Defendants' Preliminary Invalidity Contentions
2002	U.S. District Court Order in *Eight kHz, LLC v. Meta Platforms, Inc*., No. 6:22-cv-00575-ADA-DTG (W.D. Tex. Aug. 30, 2023), Granting Joint Motion to Amend Scheduling Order
2003	U.S. District Court Order in *Eight kHz, LLC v. Meta Platforms, Inc*., No. 6:22-cv-00575-ADA-DTG (W.D. Tex. Sep. 11, 2023), Resetting Markman Hearing Via Zoom
2004	Memorandum from Katherine K. Vidal on Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022)
2005	Lex Machina, Patent Cases (All Judges) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023
2006	Lex Machina, Patent Cases (Judge Alan D. Albright) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023
2007	Declaration of Durand R. Begault, Ph.D. in Support of the POPR
2008	C.V. of Durand R. Begault, Ph.D.
2009	April 26, 2023 Deposition Transcript of Kyla Alanna McMullen, Ph.D. from *Eight KHZ, LLC v. Meta Platforms, Inc. et al.*, 6:22-cv-575-ADA-DTG (W.D. Tex.)
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2012	H. Dudley, H, *The carrier nature of speech*, Bell Systems Technical Journal, 19, 495-515 (1940)
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Patent Owner Eight KHZ, LLC ("8KHZ") submits this Preliminary Response to the Petition for *inter partes* review ("IPR") of claims 1, 4-6, 8-11, 14-15, and 17-19 of U.S. Patent No. 9,282,196 ("196 Patent"). Paper 2 ("Pet.").

I. INTRODUCTION

The '196 Patent discloses and claims an unconventional method of "mov[ing] a sound localization point (SLP) of a voice of a computer program during a voice exchange between the computer program and a person." Ex. 1001, Abstract. The claims disclose that the voice of a computer program is provided to the user as "binaural sound" and "during the voice exchange between the computer program" and the user. *Id.*, claim 1.

Institution of an IPR is authorized when "the information presented in the petition … and any response … shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. §314(a).

Petitioner does not satisfy the threshold for institution of this IPR because it has not shown there is a reasonable likelihood that it would prevail in establishing the unpatentability of at least one challenged claim. Institution of this IPR should be denied. Petitioner fails to address the differences between the claimed subject matter and the prior art, and provide a reasoned analysis of how and why a person of ordinary skill in the art ("POSITA") would combine the prior art in view of the

knowledge of a POSITA, and show they would have had a reasonable expectation of success.

A. The '196 Patent

The '196 Patent is titled "Moving a sound localization point of a computer program during a voice exchange," and was issued by the United States Patent and Trademark Office on March 8, 2016. Ex. 1001, codes 54, 45.

1. The '196 Patent discloses and claims a novel method for providing a voice of a computer program as binaural sound to a user during a voice exchange between the user and the computer program, and then moving the sound localization point of the same during the voice exchange at the user's command.

The '196 Patent is directed to a method that processes a voice of a computer program into binaural sound, which is then provided to the user at a sound localization point ("SLP") with a coordinate location that occurs "away from and proximate to" the user. *Id.*, claim 1. The method further enables the user to register a command to move the SLP to different locations around the user, which is subsequently effected—all "during a voice exchange between the computer program and the user." *Id.* The voice of a computer program disclosed by claims of the '196 Patent are generated by "computer programs with interactive audio input/output interfaces." *Id.*, 35:66-36:1.

2. The challenged claims

Of the Challenged Claims, claim 1 is one of the three challenged independent claims, and is reproduced below:

1. A method executed by one or more electronic devices in an electronic system that move a sound localization point (SLP) of ***a voice of a computer program during a voice exchange between the computer program and a user***, the method comprising:

providing, through an electronic earphone being located at a head of the user and being in communication with a handheld portable electronic device (HPED), binaural sound to the user ***during the voice exchange between the computer program*** and the user such that an origin of ***the voice of the computer program*** occurs at the SLP at a first location in empty space that is away from and proximate to the user;

receiving, from the user and at the HPED, a command to move the SLP of ***the voice of the computer program*** from the first location in empty space to a second location in empty space that is proximate to the first location and away from and proximate to the user;

moving, based on the command and ***during the voice exchange between the computer program and the user***, the SLP of ***the voice of the computer program*** from the first location in empty space to the second

location in empty space that is proximate to the first location and away from and proximate to the user; and

providing, through the electronic earphone being located at the head of the user and being in communication with the HPED, the binaural sound to the user ***during the voice exchange between the computer program and the user*** such that the origin of ***the voice of the computer program*** occurs at the SLP at the second location in empty space that is proximate to the first location and away from and proximate to the user.

Ex. 1001, claim 8 (emphasis added).[1]

II. THE ASSERTED GROUNDS

Petitioner asserts the Challenged Claims are unpatentable based on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1, 8, 15, 17	103	Li (Ex. 1006)
4, 6, 9-10, 14, 18	103	Li in view of Ballas (Ex. 1008)
5	103	Li in view of Ballas and Sandgren (Ex. 1017)
19	103	Li in view of Sandgren

[1] Unless otherwise noted, all emphases (underlined, bolded, and italicized) are added by 8KHZ.

11	103	Li in view of Woo (Ex. 1016)
1, 8, 15, 17	103	Bedingfield (Ex. 1005)
4, 6, 9-10, 14, 18	103	Bedingfield in view of Ballas
5	103	Bedingfield in view of Ballas and Sandgren
19	103	Bedingfield in view of Sandgren
11	103	Bedingfield in view of Woo

Pet. 5-6. Petitioner supports the grounds with the Declaration of Dr. Kyriakakis (Ex. 1003).

A. Claim Construction

The claim terms should be given their "ordinary and customary meaning" as understood by a POSITA in view of the patent claims, specification and prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-14 (Fed. Cir. 2005) (en banc); and 37 C.F.R. § 42.100(b). There is a "heavy presumption" that the '090 Patent's disputed claim terms "are to be given their ordinary and customary meaning." *See Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1358 (Fed. Cir. 2017) (citation omitted). The ordinary meaning may be readily apparent to a POSITA, and claim

construction can involve merely accepting the meaning of commonly understood words. *Phillips*, 415 F.3d at 1314.

The Petitioner's "any reasonable construction, including their plain meaning" harkens back to the broadest reasonable interpretation standard used by the Board before November 13, 2018 and conflicts with the expressed directive that the Board use the same claim construction standard as in a civil action. 37 C.F.R. § 42.100(b). Thus, Petitioner's assertion that the claims should be construed to include "any reasonable construction" should be rejected. Pet. 15. Here, no express constructions of the claims are necessary. To the extent that any term needs construction, the plain and ordinary mean of the term should be adopted.

B. Person of Ordinary Skill in the Art

A POSITA would have several years of academic and/or professional experience in a technical field relevant to digital audio signal processing, such as electrical engineering, computer engineering, or computer science; and a familiarity with relevant literature and concepts concerning virtual 3D audio processing, which were widely available at the time of disclosure.[2]

[2] For consistency, 8KHZ advances the same POSITA standard it proposed in the parallel district court litigation. That said, the expert retained by 8KHZ in this proceeding meets the standard proposed by Petitioner. *See* Exs. 2007-08.

III. PETITIONER HAS FAILED TO ESTABLISH A REASONABLE LIKELIHOOD THAT ANY CLAIM IS UNPATENTABLE

A. Institution Standards

Review cannot be instituted unless the Petition demonstrates a reasonable likelihood that at least one of the challenged claims is unpatentable. 35 U.S.C. §314(a); 37 C.F.R. §42.108(c). The Board "will not take on the role of advocate for a party, trying to make out a case the party has not adequately stated." Standing Order ¶121.5.2 (B.P.A.I. Mar. 8, 2011). Rather, it is Petitioner's duty to provide sufficient grounds for the institution of a review "focus[ing] on concise, well organized, easy-to-follow arguments supported by readily identifiable evidence of record." *Cisco Sys., Inc. v. C-Cation Tech, LLC*, IPR2014-00454, Paper No. 12 at 11 (PTAB Aug. 29, 2014).

The ultimate determination of obviousness under 35 U.S.C. §103 is a question of law based on underlying factual findings. *In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1362 (Fed. Cir. 2012) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1996)). "To satisfy its burden of proving obviousness, a petitioner cannot employ merely conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380-81 (Fed. Cir. 2016). The "factual inquiry" into the reasons for "combin[ing] references must be thorough and

searching, and the need for specificity pervades." *In re NuVasive, Inc.*, 842 F.3d 1376, 1381-82 (Fed. Cir. 2016) (internal quotations and citations omitted). The specific reasoning must include some rational underpinning to combine the prior art elements as claimed to support the conclusion of obviousness. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). It is Petitioner's burden to demonstrate a motivation to combine, and a reasonable expectation of success. *See In re Magnum Oil Tools*, 829 F.3d at 1381. Mere conclusory statements are insufficient. *Id.*, at 1380.

Petitioner asserts ten obviousness grounds of unpatentability. Pet. 5-6. For the purpose of this POPR, the Board need only consider the validity of independent claims 1, 8, and 15 of Grounds 1 and 6. As shown below, the Petition fails to establish a reasonable likelihood that Petitioner will prevail. A trial therefore should not be instituted.

B. The Petition Should Not be Instituted on Ground 1 Because the Prior Art Fails to Disclose or Teach the Invention as Claimed.

Petitioner asserts claims 1, 8, 15, and 17 are obvious based on Li alone. *Id.* The asserted prior art fails to disclose one or more limitations, either expressly or inherently, and a POSITA would not have been motivated to start with or combine the asserted references to arrive at the claimed subject matter, nor would they have had a reasonable expectation of success in arriving at the claimed subject matter.

The Petition fails to establish a reasonable likelihood that Li would render the challenged claims obvious. The Board should therefore deny institution based on Ground 1.

1. Li

Li is directed at generating generates a configurable sound field "using recorded or pre-recorded sound tracks." Ex. 1006, Abstract; *see also id.*, 4:7-16. Li explains the need for a method that performs "3D sound recording, processing, synthesis and reproduction to enhance existing audio performance to match a vivid 3D vision field." *Id.*, 3:11-15. This cannot be accomplished, Li explains, without "a method and a configurable 3D sound system that accurately measure head related transfer functions using a simulator apparatus." *Id.*, 3:16-17. To solve this problem, Li teaches a "simulator apparatus" shaped as a human having "a head with detailed facial characteristics, ears, a neck, and an anatomical torso with full shoulders." *Id.*, 3:59-63. The simulator apparatus includes a microphone array that captures and records 3D sound from a sound source placed around the simulator apparatus. *Id.*, 4:6-16. After the 3D sound is recorded, a user can configure positions and movements of the sound sources via a graphical user interface on a sound processing application. *Id.*, 5:7-18.

2. Li fails to disclose, teach, or suggest several limitations of independent claims 1 and 8 discussed above, nor does it render obvious claims 1 and 8

a. Li fails to disclose or teach moving a SLP of a voice of a computer program during a voice exchange between the computer program and a user of limitation 1[pre]/8[pre][3]

Petitioner alleges that Li teaches the preamble because it discloses "placing different speaking users at different spots to mimic a real conference room environment." Pet. 23-24. But Petitioner fails to offer any evidence from Li showing that that Li's placement of different speaking users at different spots involves moving a voice of a computer program and occurs during a voice exchange between the computer program and a user, as required by the claim. *Id.*

Instead of providing evidence from Li in support of its assertion, Petitioner entirely relies on a conclusory statement made by its expert: "***I read Li*** as disclosing that moving the sound source (mov[ing] a SLP) takes place *during a voice exchange between the computer program and a user/person*." Ex. 1003, ¶104; *see also* Pet. 23-24. For this reason alone, the Ground 1 of the Petition is fatally defective, because it does neither "specify sufficiently where each element of each challenged claim is found" in Li, nor include an explanation of the significance of the quotations and

[3] By rebutting Petitioner's argument vis-à-vis the preamble, 8KHZ does not concede that the preamble is a limitation and reserves the right to contend that the preamble is not a limitation of the claim.

citations from Li. *Google Inc. and Twitter, Inc. v. EVERYMD.COM LLC*, IPR2014-00347, Paper 9, at 23-25 (PTAB May 22, 2014); *see also* 37 C.F.R. § 42.104(b)(4), 42.22.

Further, there is no detailed discussion in the Petition supporting Petitioner's conclusion, requiring 8KHZ and the Board to go in search of the supporting analysis in Dr. Kyriakakis's declaration (which is also conclusory). Petitioner incorporates arguments by reference and therefore violates 37 C.F.R. § 42.6(a)(3). *Cisco Systems, Inc. v. C-Cation Techs.*, IPR2014-00454, Paper 12 at 9 (PTAB. Aug. 29, 2014) (designated informative) (Providing that "practice of citing the Declaration to support conclusory statements that are not otherwise supported in the Petition also amounts to incorporation by reference."). This reason alone suffices to deny institution. *See Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1370-71 (Fed. Cir. Jun. 12, 2023).

Even if this is overlooked, statements offered by Petitioner's expert "are conclusory and unsupported, add[] little to the conclusory assertion for which [they are] offered to support, and are entitled to little weight." *Xerox Corp. et al. v. Bytemark, Inc*. IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022) (precedential). Similar to *Xerox*, Petitioner's only evidence in support of its assertion that Li moves the sound source "during a voice exchange between the computer program and a user/person," (Pet. 23-24), is the conclusory opinion of its expert: "***I read Li*** as

disclosing that moving the sound source (mov[ing] a SLP) takes place *during a voice exchange between the computer program and a user/person*." Ex. 1003, ¶104. This is no better than the statement made by. Dr. Jones in *Xerox* declaring that "a POSITA would understand that such a blocking would require recording the blocking in a data record associated with that user's account." *Xerox*, Paper 9 at 15. The Board disregarded Dr. Jones's statement as conclusory because he did not "cite to any additional supporting evidence or provide any technical reasoning to support his statement." *Id.* Here, the Petition is devoid of supporting evidence and analysis supply the conclusion. For the same reason as in *Xerox*, the conclusory, unsupported, and purely subjective statement here made by Petitioner's expert should be disregarded and entitled to no weight.

Further, and more important, to the extent that Petitioner isolates a single sentence from Li and interprets it out of context and contrary to Li's teaching, Petitioner's argument must fail. Li discloses that "[m]oreover, the configurable 3D sound system 900 provides a method of communication among multiple people, for example, in a conference call, by placing different speaking users at different spots to mimic a real conference room environment." Ex. 1006, 22:1-5. This disclosure has nothing to do with a voice of a computer program or a voice exchange with the same. Yet, Petitioner argues, in a conclusory fashion, that "[w]hen Li's user places different speaking users at different spots to mimic a real conference room

environment, this takes place during a conference call, which involves a voice exchange between ***the processed voice of the speaker (computer program) and a user/person.***" Pet. 24 (original citation and internal quotation marks omitted). As discussed in greater detail below, such flaws pervade Petitioner's arguments.

i. Li does not teach, suggest, or disclose a voice of computer program

Petitioner advances two inconsistent positions about teachings of Li vis-à-vis a voice of a computer program. At first blush, both Petitioner and its expert repeatedly admit that "a voice of a computer program is not expressly part of Li's conference call embodiment," and argue that Li's "other embodiments" teaches using a voice of a computer program. *Id.*, 17, 23; Ex. 1003, ¶102. Despite this admission, Petitioner concludes that "[w]hen Li's user places different speaking users at different spots to mimic a real conference room environment, this takes place during a conference call, which involves a voice exchange between ***the processed voice of the speaker (computer program) and a user/person.***" Pet. 24 (original citation and internal quotation marks omitted). Essentially, Petitioner concludes that the processed voice of the speaking user in Li's conference call example constitutes a voice of a computer program. Petitioner's suggestion that "the processed voice of the speaker" in Li's conference call is a voice of a computer program runs counter to Petitioner's and its expert's admission that "Li does not expressly disclose a voice

of a computer program as part of its conference call embodiment." Ex. 1003, ¶102. Petitioner should be held to this admission.

Further, Petitioner's assertion that "Li teaches using such voice [i.e., voice of a computer program] in relation to other embodiments" is incorrect. Pet. 17, 23. As an initial matter, Petitioner fails to point to any specific embodiment in Li that teaches a voice of a computer program. Further, Petitioner's assertion cannot be reconciled with the definition of "a voice of a computer program." Petitioner and its expert admit that "a voice of a computer program" is necessarily a "computer-synthesized voice," which requires "a computer program synthesizing a voice to provide a voice of a computer program." Pet. 16; Ex. 1003, ¶¶89-93. Petitioner's expert even provides examples of such programs in the context of text-to-speech synthesis. Pet. 16; Ex. 1003, ¶¶89-93. In all of the examples provided by Petitioner's expert, electronic means are used ***to simulate natural sound*** (e.g., natural speech or natural instrument sounds). Those examples, and sound synthesis in general, do not include natural speech or natural instrument sounds. Ex. 2007, ¶¶12-14 ("Neither type of synthesis involves the presence of a human or a musical instrument."). Yet, Petitioner asserts that "Li teaches using such voice [i.e., a voice of a computer program] in relation to other embodiments," partly because Li discloses a computer program for "processing the speaker's voice to position 'different speaking users at different spots.'" Pet. 23. Not so, because "[t]he creation of virtual sound sources

from a microphone in a real-time communication scenario is independent of the constraints and consequent advantages of a computer-based speech synthesis system." Ex. 2007, ¶16.

A POSITA would not understand Li to disclose a voice of a computer program (defined by Petitioner and its expert as a "computer-synthesized voice") or any program for sound synthesis. While Li does use terms such as "sound synthesis," (Pet. 17), and "synthesis [sic] 3D binaural sound," (*Id*., 19), these terms are consistently used throughout Li to mean synthesis of sound localization positions for natural sounds. Ex. 2007, ¶26. Li makes clear that what it refers to as sound synthesis is nothing more than processing a natural sound for spatialization purposes (i.e., synthesis of sound localization positions)—which is different from producing a computer-synthesized voice: "***Binaural sound reconfiguration is a process of synthesizing the 3D binaural sound*** on a computing device … based on the user's preference, ***whereby the user determines the 3D sound field of the played sounds***." Ex. 1006, 19:48-52; Ex. 2007, ¶27. Li expressly discloses that its sound system "synthesis [sic] virtual sound sources" by using HRTFs and "place the virtual sound sources, which are output … on a certain location to achieve 3D spatial effects." Ex. 1006, 11:55-67; *see also* 23:15-20 ("The 3D sound processing application 1602 uses configurable spatial alignments with accurate head related transfer functions (HRTFs), to ***synthesize 3D binaural sound based on the positioning of the***

identified musical instruments 1701 and the singer 1702 in a 3D space.”). Further, what Li refers to as sound synthesis involves processing a pre-recorded sound (e.g., a soundtrack) through the HRTFs:

> When a bank of accurate HRTFs are collected in the HRTF database 908, the process of mixing and ***synthesis introduces an additional factor as the location or spatial cue of different sound sources to obtain the 3D binaural sound.*** The 3D sound processing application 1602 allows a user to ***set the sources of each sound in a 3D field by processing the sound tracks through the HRTFs*** and then to enjoy his/her own style of the 3D binaural sound with regular headphones.

Ex. 1006, 20:40-48. No POSITA would understand Li to teach, suggest, or disclose a voice of a computer program, sound synthesis, or a computer-synthesized voice, because processing sounds through HRTFs—which Li’s system is based on—does no more than changing sound localization positions. *See* Ex. 2007, ¶¶25-27. Even Petitioner’s expert in the parallel district court proceeding admitted under oath that HRTFs are used only to “render sounds … to different locations in space.” Ex. 2009, 87; *see also id.*, 19 (“The SLP could be created with the use of the HRTF.”).

Petitioner also cites Li’s disclosures of “‘sound generating devices or sound emitting devices,’” ‘a person’s *voice*,’ or ‘pre-recorded multiple sound tracks’” to suggest that Li teaches a voice of a computer program. Pet. 23. But Petitioner’s cherry-picked language from Li creates a different impression than the entire passage:

> As used herein, the term "sound sources" refers to similar or different ***sound generating devices or sound emitting devices***, for example, ***musical instruments***, ***loudspeakers***, televisions, music systems, home theater systems, theater systems, a person's voice, ***pre-recorded*** multiple sound tracks, ***pre-recorded stereo sound tracks***, etc.

Ex. 1006, 4:58-64. None of these examples involve sound synthesis or a computer synthesized voice as those terms are understood by a POSITA—instead, all of these examples include natural speech or natural instrument sounds or replaying of the same from pre-recorded soundtracks. Under Petitioner's faulty logic, recording a singer's voice and then playing it back through a set of loudspeakers would somehow transform the singer's voice into a voice of a computer program. Similarly, under Petitioner's read, real-time computer manipulation of a natural voice input (e.g., human voice) from an array of microphones via HRTF filter creates a voice of a computer program. Wrong. As explained by Dr. Begault, a PHOSITA understands "a voice of a computer program" involves synthesizing voice by a computer through combining a voice model and a character model—giving "personality" to the generated voice. Ex. 2007, ¶8. Li, however, merely "teaches the use of a microphone array to capture speech from humans." *Id.*, ¶27. Li then pre-processes this captured speech using HRTF filters to create a set of fixed spatial positions that can be selected by a user. *See id*. Therefore, contrary to Petitioner's assertion, no embodiment of Li teaches a voice of a computer program, for Li does not disclose

combining voice and character models by a computer to synthesize speech. *Id.*, ¶25 ("Li does not disclose speech synthesis".).

Additionally, Petitioner's assertion that Li's conference call teaches a voice exchange between the computer program and a user, because it "involves *a voice* exchange between the processed voice of the speaker (*computer program*) *and a user/person*," (Pet. 24), directly contradicts the definition provided by the '196 Patent for the voice of a computer program. Through its embodiments, the '196 Patent expressly discloses that a voice exchange between the computer program and a user necessarily involves synthesized speech (i.e., a voice of a computer program)—***but not natural voices of people***:

> Consider an example in which the second user 2362 is speaking to and listening to the four others (2366 localized at 2380, 2360, 2364, and 2368 localized at 2390). In this example, ***however, the others are not people but computer programs with interactive audio input/output interfaces***.

Ex. 1001, 35:64-36:1. Therefore, Petitioner's argument that Li's conference call—which includes only voices of people—somehow includes a voice of a computer program "flies in the face of the many statements in the written description" clearly indicating that a voice of a computer program cannot be voices of people. *SciMed Life Sys., Inc. v. Adv. Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001) (holding that when the specification defines the invention as having a certain structure or functionality, in that case a specific "coaxial lumen structure," the claim

term must be construed to have that structure). When the invention is described as specifically including some structure, then the claim must be construed as including that structure. *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1301 (Fed. Cir. 1999) ("There is no basis for construing 'including' the ring to mean not including the ring."). Accordingly, when the '196 Patent specification states that voice exchange with a computer program does not include voices of any other people, there is no basis for the assertion that Li's conference call—which includes only voices of people—teaches the claim limitation.

Aside from the fact that Li does not teach, suggest, or disclose a voice of a computer program as discussed above, Petitioner's obviousness analysis is fatally incomplete, for it does no more than identifying teachings of the claim in the prior art. What is further necessary—and is missing from the Petition—is an articulated reason with some rational underpinning to combine the known elements in the way the claimed invention does to support a conclusion of obviousness; and this analysis must be made explicit. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418-19 (2007)). It is Petitioner's burden to demonstrate that a skilled artisan would be motivated to combine the teachings to arrive at the claimed invention, and that a POSITA would have a reasonable expectation of success. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016).

Petitioner alleges that the claimed invention "involve[s] a combination of known prior art elements (spatialization and computer-generated[4] voice)," but fails to provide an explicit analysis of how and why a POSITA would be motivated to combine Li with "computerized voice synthesis," (Pet. 16) and that a POSITA would have a reasonable expectation of success. Pet. 17-18. Specifically, Petitioner has failed to identify what features of Li would need to be modified to include "a voice of a computer program," and explain how such modifications would work. Instead, Petitioner simply makes a conclusory statement that "[a]s the POSA would have appreciated, implementing Li's sound source as a voice of a computer program would have been advantageous because it would have saved time, cost, and storage space, added flexibility to vocal range, and improved clarity." Pet. 23. Aside from the conclusory nature of this statement, time, cost, and improved clarity have nothing to do with modifying the embodiments in Li to include a voice exchange with a computer program. Also, adding flexibility to vocal range is not related in any sense to showing how a POSITA would endeavor to modify Li—which focuses on capturing accurate HRTFs to generate 3D sound—to include a voice of a computer program. These reasons provide no meaningful explanation as to how and why

[4] Petitioner uses "computer-generated voice" and "computer-synthesized voice" interchangeably. *Compare* Pet. 16 *with id*., 18.

POSITA could modify the embodiments in Li to arrive at the recitations of the independent claims.

In fact, no POSITA would be motivated to modify Li to include a voice of a computer program, for Li's system is fundamentally and technically incapable of spatializing a voice of a computer program. Li repeatedly discloses that its 3D sound processing application "generates a configurable sound field on a graphical user interface ***using recorded or pre-recorded sound tracks***." Ex. 1006, Abstract; *see also, e.g.*, 4:7-16; 5:7-10; 5:22-26; 5:30-33; 14:65-15:1. Further, Li discloses how to record a 3D sound from said recorded or pre-recorded soundtracks. As shown in Li's FIGs. 3A-3C and 4, Li teaches "a simulator apparatus 300 configured to simulate an upper body of a human" with "a microphone 313 positioned in [each] ear 303 of the simulator apparatus 300" that capture 3D sound with HRTFs from a sound source (e.g., "loudspeakers 401") positioned and being moved around the simulator apparatus as shown in FIG. 4. *Id.*, 12:1-46. "The microphone array system records 702 sound tracks" that correspond to "one of the different directions in the 3D space" where the sound source is located with respect to the simulator apparatus. *Id.*, 14:48-60. The system records these sound tracks, and a "3D sound processing application generates a configurable sound field from the recorded sound track." *Id.*, 15:12-13. Thereafter, the user can configure the positions and movements of the recorded soundtracks via a graphical user interface (GUI). *Id.*, 15:27-32; 5:7-10; 26:30-32.

For a POSITA to modify Li's disclosure to include a voice of a computer program, any such voice must be positioned and being moved around the simulator apparatus, as shown in FIG. 4, to generate 3D sound with HRTFs. Petitioner does not explain, nor can it explain, how this is possible.

Li fails to disclose, teach, or suggest a voice of a computer program as claimed, and Petitioner has failed to provide an explicit analysis in the Petition of how and why the prior art elements could be combined to arrive at the invention as claimed.

ii. Li does not teach, suggest, or disclose a voice exchange with the computer program

The Petition makes no argument whatsoever about a key claim element: "a ***voice exchange*** between a user and the computer program." The claims are explicit that this voice exchange not only involves "***a voice of a computer program***" but also is "***between a user and the computer program***." Ex. 1001, claim 1. Essentially, the claims require an interactive two-way communication between the computer program and the user, for which the specification also provides support: "Consider an example in which ***the second user 2362 is speaking to and listening to the four others*** (2366 localized at 2380, 2360, 2364, and 2368 localized at 2390). In this example, however, ***the others are not people but computer programs with interactive audio input/output interfaces***." *Id.*, 35:64-36:1; Ex. 2007, ¶¶17-18.

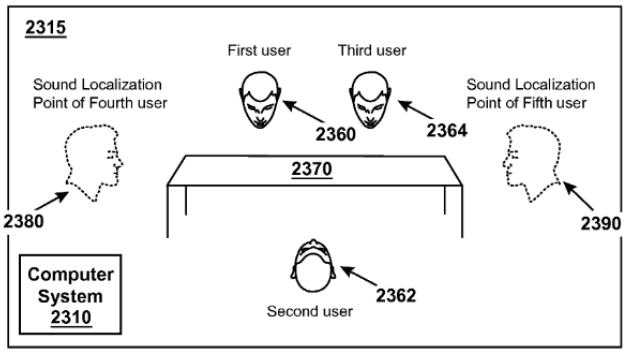
As discussed above, not only does Li fail to teach, suggest, or disclose speech synthesis, but it also cannot be modified to include speech synthesis. Therefore, given Li's silence on speech synthesis—which is requisite for the "voice exchange" limitation—the Ground 1 of the Petition is fatally defective, because it does neither "specify sufficiently where each element of each challenged claim is found" in Li. *In re EVERYMD.COM*, Paper 9, at 23-25; see also 37 C.F.R. § 42.104(b)(4), 42.22.

That said, to the extent that Petitioner alleges that modifying Li to include "computerized text-to-speech synthesis" is a "natural extension of Li," (Pet. 16), which would allegedly render obvious this claim limitation, Petitioner's argument should be rejected—because no text-to-speech program includes a two-way communication described in claims of the '196 Patent: "voice exchange ***between a user and the computer program***." Ex. 2007, ¶¶8, 11, 17 ("[T]he text-to-speech examples cited do not include a two-way communication with the voice of a computer system, as described in '196."). This is clearly established by the '196 Patent specification in discussing Figure 23 reproduced below:

> Consider an example in which ***the second user 2362 is speaking to and listening to the four others*** (2366 localized at 2380, 2360, 2364, and 2368 localized at 2390). In this example, however, ***the others are not people but computer programs with interactive audio input/output interfaces***. … ***Each audio window/process could perceive when it was the one being addressed by the user 2362*** by comparing the sound

> pressure received relative to that received at the other three process/window points and/or by monitoring the head orientation of user 2362.

Ex. 1001, 35:64-36:12.



Ex. 1001, Figure 23

Therefore, because mere text-reading with a computer synthesized voice does not constitute a two-way communication, modifying Li with text-to-speech functionality still does not render obvious "a voice exchange between a user and the computer program."

Further, Petitioner fails to explain how a Li's listener can have voice exchange with a computer program. As discussed in § III.B.2.a.i, the embodiments in Li are designed to place sound sources (i.e., loudspeakers in FIG. 4) at different locations with respect to the simulator apparatus in order to capture different soundtracks. These soundtracks are subsequently edited with 3D sound processing application based on a listener's desired configuration and then played to the listener. Assuming,

arguendo, that Li's sound sources can be a voice of a computer program, Petitioner fails to explain how the listener communicates with a computer program involving a simulator apparatus. Specifically, Li's simulator apparatus does not include speakers—nor can it include speakers since its purpose is to capture HRIRs/HRTFs with microphone arrays "in a quiet sound treated room free of impulsive background noise." Ex. 1006, 10:39-41. Thus, the voice of the listener cannot get communicated to the computer program through the stimulator apparatus and during the recording process. Further, how does a computer program understand this voice? Additionally, how is the voice of a computer program provided in binaural sound? In fact, the embodiments in Li would have to be significantly modified to accommodate a voice exchange between the listener and a computer program. These modifications include solving numerous complex technical problems described above—none of which are contemplated in Li.

Petitioner fails to provide an explicit analysis of how and why a POSITA would be motivated to modify Li to include the "voice exchange" capability with a computer program, and that a POSITA would have a reasonable expectation of success. Specifically, Petitioner has failed to identify what features of Li would need to be modified to include "voice exchange between a user and the computer program" and explain how such modifications would work. Further, Petitioner fails

to resolve differences between Li and the claimed subject matter regarding the "voice exchange" capability, and so fails to adequately state a claim for relief:

> A petitioner who does not state the differences between a challenged claim and the prior art, and relies instead on the Patent Owner and the Board to determine those differences based on the rest of the submission in the petition risks having the corresponding ground of obviousness not included for trial for failing to adequately state a claim for relief.

Liberty Mutual Insurance Co. v. Progressive Casualty Insurance Co., CBM2012-00003, Paper 7 at 2-3 (PTAB Oct. 25, 2012) (precedential).

iii. Li does not teach, suggest, or disclose moving a SLP of a voice of a computer program during a voice exchange

Petitioner argues that Li teaches this element because of its conference call disclosure. Pet. 23-24. However, Petitioner's argument is entirely based on a word search in Li for the term "conference call,"[5] but citations to these locations are taken out of context. A POSITA, reading Li and all the embodiments taught therein, would not arrive at Petitioner's conclusion.

As discussed in §§ III.B.2.a.i-ii, Li discloses neither "a voice of a computer program" nor "a voice exchange between a user and the computer program," and thus it plausibly follows that Li's system cannot "***move*** a sound localization point

(SLP) of a voice of a computer program ***during*** a voice exchange between the computer program and a user." Even assuming, arguendo, that Li discloses both "a voice of a computer program" and "a voice exchange between a user and the computer program"—which it does not—Li's system does not, nor can it be modified to, move the former "***during***" the latter as claimed.

Li discloses that its system "mimic[s] a real conference room environment." For this to be true, Li's system necessarily cannot be modified to "***move*** a sound localization point (SLP) … ***during*** a voice exchange…." As discussed in § III.B.2.a.i, Li teaches methods and systems that enable a user to record 3D sound via the simulator apparatus and then move recorded sound tracks from this 3D sound via a GUI of the 3D sound application. Li repeatedly discloses that the sound being moved is "recorded or pre-recorded sound tracks." None of the examples in Li includes moving a voice during a voice exchange. Instead, all examples and embodiments in Li are directed to recording, and then moving a 3D sound. Thus, in Li no moving of a sound can happen before first recording it, because Li addresses the long-felt need for "performing 3D sound recording, processing, synthesis and reproduction to enhance existing audio performance to match a vivid 3D vision field, thereby enhancing a user's experience." Ex. 1006, 3:11-16.

For example, Li's FIG. 19 shows "a ***reconstruction*** of a scene of a concert stage," depicting a "user 1703 standing in the middle of a concert stage." Ex. 1006,

21:40-46. "The user may configure positions and the movements of the sound sources … to acoustically experience being in the center of the state at the music concert …." *Id.*, 21:47-52. Since this example relates a reconstruction of a scene of a concert, the user is listening to a recorded soundtrack of the music concert, and thus the user makes these configurations on the recorded soundtrack—and not during the music concert (i.e., analogous to "during the voice exchange between the computer program and the user"). This enables music artists to add "special effects" to their recorded soundtracks which "allows music artists to present their music to the user in an enhanced manner." *Id.*, 21:58-66.

As discussed in § III.B.2.a.i, Li's method of recording a 3D sound requires the user to position the sound source around the simulator apparatus and then play the sound. Microphone arrays in the simulator apparatus record the 3D sound, and thereafter the user interacts with a GUI to move the 3D sound. The conundrum that Petitioner fails to address is if moving a sound requires recording it, as Li discloses, then how is it even possible to record the sound "during a voice exchange"—which is supposed to "mimic a real conference room environment?" Further, if the user is the "sound source," how could the user position themselves at different locations around the simulator apparatus and have a voice exchange with a computer program? Alternatively, if the computer program is the "sound source," how could the user have a voice exchange with a computer program positioned at different locations

around the simulator apparatus? These hypothetical modifications to Li are technically impossible because the embodiments in Li were not intended to move the SLP of a voice during a voice exchange with a computer program.

Even assuming, *arguendo*, that Li suggests combining its conference call example with a voice of a computer program (which it does not for the reasons discussed in § III.B.2.a.i), Li never discloses that placement of different speaking users occurs during a conference call—that necessarily involves a live exchange of sound amongst speakers. Ex. 1006, 22:1-5. But as explained in § III.B.2.a.i, Li repeatedly discloses that sound being moved is a recorded sound or a pre-recorded sound:

> The 3D sound processing application is executable by at least one processor configured to measure head related transfer functions, to simultaneously generate configurable three-dimensional (3D) sounds in communication with a microphone array system, to simultaneously generate configurable 3D sounds ***using pre-recorded sound tracks and pre-recorded stereo sound tracks, to generate a configurable 3D binaural sound from a stereo sound or a multi-channel sound***, and to generate a configurable 3D surround sound.

Id., 4:7-16. None of the examples in Li includes moving a voice during a voice exchange. Instead, all examples and embodiments in Li are directed to recording, storing, and then moving 3D sound.

Further, Li's users must first input their desired configuration before any binaural sound being rendered—but Li does not disclose a feature that allows users

to change their desired configuration during rendering. *See, e.g.*, *Id.*, 22:64-67 ("***The configurable 3D sound system 900 renders the 3D binaural sound from the input configuration*** to provide the user with the reconstructed virtual audio 3D space he/she designed."). Li's music listening example clearly illustrates that users may only place sound sources at their desired spots prior to rendering:

> With respect to music listening, ***when a user wants a sound track to come from one particular direction, the user enters his/her preference*** by placing an icon on a corresponding location on the generated configurable sound field via a touch screen of the user's computing device. ***The 3D sound processing application then applies the corresponding HRIR for convolution*** in the time domain or applies the corresponding HRTF for a multiplication in the frequency domain. Using a bank of measured HRIRs or HRTFs, ***the 3D sound processing application accurately positions the acoustic sound source on the spot that the user prefers***.

Similarly, Li's conference call example at best suggests that a user can "plac[e] different speaking users at different spots" only prior to rendering the pre-recorded voices of speaking users at the selected spots—once rendered, Li does not disclose that its users may reconfigure ***during their voice exchange*** with other speaking users.

b. Li fails to disclose or teach providing binaural sound to the user during the voice exchange between the computer program and the user such that an origin of the voice of the computer program occurs at the SLP at a first location of limitation 1[a]/8[a]

Petitioner's obviousness analysis regarding this limitation should be rejected, because, as discussed in greater detail in §III.B.2.a, Li discloses neither a voice of a computer program, (*see* §III.B.2.a.i), nor a voice exchange with a computer program (*see* §III.B.2.a.ii). Therefore, Petitioner has failed to "specify sufficiently" where in Li binaural sound is provided to the user "***during the voice exchange between the computer program and the user*** such that an origin of ***the voice of the computer program*** occurs at the SLP at a first location"—thus, Ground 1 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

c. Li fails to disclose or teach moving the SLP of the voice of the computer program of limitation 1[b]/8[b]

Petitioner's obviousness analysis regarding this limitation should be rejected, because, as discussed in greater detail in §III.B.2.a, Li does not disclose moving the SLP of a voice of a computer program. *See* §III.B.2.a.iii. Therefore, Petitioner has failed to "specify sufficiently" where in Li binaural sound is provided to the user "***moving the SLP of the voice of the computer program***" is found—thus, Ground 1

of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

d. Li fails to disclose or teach moving, during the voice exchange between the computer program and the user, the SLP of the voice of the computer program of limitation 1[c]/8[c]

Petitioner's obviousness analysis regarding this limitation should be rejected, because, as discussed in greater detail in §III.B.2.a, Li discloses none of a voice of a computer program, (*see* §III.B.2.a.i), a voice exchange with a computer program (*see* §III.B.2.a.ii), and moving the SLP of a voice of a computer program (*see* §III.B.2.a.iii). Therefore, Petitioner has failed to "specify sufficiently" where in Li "moving, during the voice exchange between the computer program and the user, the SLP of the voice of the computer program" is found—thus, Ground 1 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

e. Li fails to disclose or teach providing binaural sound to the user during the voice exchange between the computer program and the user such that an origin of the voice of the computer program occurs at the SLP at the second location of limitation 1[d]/8[d]

Petitioner's obviousness analysis should be rejected, because, as discussed in greater detail in §III.B.2.a, Li discloses neither a voice of a computer program, (*see* §III.B.2.a.i), nor a voice exchange with a computer program (*see* §III.B.2.a.ii).

Therefore, Petitioner has failed to "specify sufficiently" where in Li binaural sound is provided to the user "***during the voice exchange between the computer program and the user*** such that an origin of ***the voice of the computer program*** occurs at the SLP at the second location"—thus, Ground 1 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.B.2.a.

3. Li fails to disclose, teach, or suggest several limitations of independent claim 15, nor does it render obvious claim 15

a. Li fails to disclose or teach moving a SLP of a voice of a computer program during a voice exchange between the computer program and a user of limitation 15[pre][6]

This preamble would not have been obvious over the prior art for the same reason as preambles 1[pre]/8[pre].

b. Li fails to disclose or teach providing the voice of the computer program of limitation 15[a]

This limitation would not have been obvious over the prior art for the same reason as limitations 1[a]/8[a].

c. Li fails to disclose or teach moving the SLP of the voice of the computer program and providing binaural sound during the voice exchange between the

[6] By rebutting Petitioner's argument vis-à-vis the preamble, 8KHZ does not concede that the preamble is a limitation and reserves the right to contend that the preamble is not a limitation of the claim.

computer program and the person such that an origin of the voice of the computer program occurs at the SLP at the second location of limitation 15[c]

This limitation would not have been obvious over the prior art for the same reason as limitations 1[c]/8[c].

Because Li fails to disclose, teach, or suggest the several limitations of independent claims 1, 8, and 15 discussed above, and does not render obvious claims 1, 8, and 15, institution based on Ground 1 should be denied.

4. All Remaining Claims That Rely on Li Fail for the Same Reasons

Because all other Challenged Claims of Grounds 1-5 depend from independent claims 1, 8, or 15, and rely on Li for at least the teachings of the several limitations of claims 1, 8, or 15 above, these claims are not rendered obvious by Li, alone or in view of other asserted prior art references.

C. The Petition Should Not be Instituted on Ground 6 Because the Prior Art Fails to Disclose or Teach the Invention as Claimed.

Petitioner asserts claims 1, 8, 15, and 17 are obvious based on Bedingfield alone. *Id.* The asserted prior art fails to disclose one or more limitations, either expressly or inherently, and a POSITA would not have been motivated to start with or combine the asserted references to arrive at the claimed subject matter, nor would they have had a reasonable expectation of success in arriving at the claimed subject matter. The Petition fails to establish a reasonable likelihood that Bedingfield would

render the challenged claims obvious. The Board should therefore deny institution based on Ground 6.

1. Bedingfield

Bedingfield proposes a solution for a problem that a participant in a conference call cannot determine which person is talking when the conference call has multiple participants. Ex. 1005, 1:32-39. To solve this problem, Bedingfield discloses a communication system that "assign[s] each participant a virtual position within a virtual sound field." *Id.*, 3:29-32. In doing so, Bedingfield uses a "multi-channel speaker system" to create a sound field "that is substantially similar (or approximately similar) to an actual sound field where the listener 102 is present between all of participants." *Id.*, 4:61-65. This way, Bedingfield explains that "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." *Id.*, 3:63-4:1. Or when there are multiple participants in the conference call, the listener may choose to hear the voice a first participant on the left side of the sound field and hears the voice of a second participant on the right side of the sound field. *Id.*, 5:28-34.

2. Bedingfield fails to disclose, teach, or suggest several limitations of independent claims 1 and 8 discussed above, nor does it render obvious claims 1 and 8

a. Bedingfield fails to disclose or teach moving a SLP of a voice of a computer program during a voice exchange between the computer program and a user of limitation 1[pre]/8[pre][7]

Petitioner alleges that Bedingfield teaches the preamble because it discloses a "method 300 of how synthetic audio placement may be organized, including selections a listener may make" (Pet. 55), and further because it discloses "'computer program products,' including 'software modules' that 'provide synthetic audio placement.'" Pet. 57. But Petitioner fails to offer any evidence from Bedingfield showing that that Bedingfield's "synthetic audio placement" involves moving a voice of a computer program that occurs during a voice exchange between the computer program and a user, as required by the claim. *Id.*

Petitioner makes similar flawed interpretations of isolated phrases elsewhere. For example, Bedingfield discloses an embodiment where a listener can change a participant's volume—which has nothing to do with moving a SLP, let alone a SLP of a computer program: "The focus object's volume may then be amplified above the volume level of the other participants. For example, when multiple participants

[7] By rebutting Petitioner's argument vis-à-vis the preamble, 8KHZ does not concede that the preamble is a limitation and reserve the right to contend that the preamble is not a limitation of the claim.

are speaking during a conference, the listener may desire to place the focus on the participant the listener desires to hear above the other speaking participants." Ex. 1005, 6:34-39. From this passage, Petitioner focuses exclusively on the clause "when multiple participants are speaking during a conference" to argue in a conclusory fashion that "[i]n Bedingfield, this [i.e., moving a SLP of a voice of a computer program] takes place during a voice exchange between the computer program and a user/person." Pet. 56-57. But this embodiment merely describes how a listener can change the volume of a certain participant's voice in a conference call that involves neither a voice of a computer program nor moving a SLP of said voice. As discussed in greater detail below, such flaws pervade Petitioner's arguments.

i. Bedingfield does not teach, suggest, or disclose a voice of computer program

Much like its argument in for Ground 1, Petitioner's argument vis-à-vis "a voice of a computer program" is oxymoronic. On one hand, both Petitioner and its expert admit that "Bedingfield does not expressly disclose *a voice of a computer program*," (Pet. 53), and on the other hand, they argue that "the POSA would have known" that Bedingfield's disclosure of "generating a synthetic audio signal" "to be a voice of a computer program." *Id.*, 51. Yet a few pages into its argument, Petitioner takes a third position, arguing that in Bedingfield's conference call includes a voice of a computer program—because it "includes a processed voice of a participant."

Id., 57. Petitioner's suggestion that "processed voice of a participant" in Bedingfield's conference call is a voice of a computer program runs counter to Petitioner's and its expert's admission that "Bedingfield does not expressly disclose *a voice of a computer program.*]" *Id.*, 53. Petitioner should be held to this admission.

Further, Petitioner's assertion that Bedingfield's disclosures as to "generating a synthetic audio signal" and "synthetic audio placement" signifies a voice of a computer program is incorrect. Pet. 51; Ex. 2007, ¶29. As discussed in greater detail in § III.B.2.a, a POSITA would understand that having a voice of a computer program requires using electronic means to simulate natural sound—but processing natural sound via a computer program for audio placement purposes does not constitute a voice of a computer program. Ex. 2007, ¶16. Even Petitioner and its expert admit that "a voice of a computer program" is necessarily a "computer-synthesized voice," which requires "a computer program synthesizing a voice to provide a voice of a computer program." Pet. 16; Ex. 1003, ¶¶89-93. Yet, Petitioner asserts that Bedingfield teaches a voice of a computer program, because its conference call includes "a processed voice of a participant," processed by "software modules that that provide synthetic audio placement." Pet. 57. Wrong.

A POSITA would not understand Bedingfield to disclose a voice of a computer program (defined by Petitioner and its expert as a "computer-synthesized voice") or any program for sound synthesis. While Bedingfield does use terms such

as "synthetic audio signal," (*Id.*, 51, 53), and "synthetic audio placement," (*Id.*, 51), these terms are consistently used throughout Bedingfield to discuss "provid[ing] a sound field for placing the plurality of audio signals." *Id.*, 2:10-11. Bedingfield makes clear that what it refers to as "synthetic audio placement" is nothing more than "***synthesizing a sound field having a synthetic position associated with each of the plurality of audio sources relative to a listener***," (Ex. 1005, 1:57-59)—which is different from producing a computer-synthesized voice. Ex. 2007, ¶32. Further, Bedingfield's "synthetic audio signal" is not a voice of a computer program—it is generated via processing an "incoming signal including audio input ***from a plurality of audio sources***" based on "***the determined synthetic position of the providing audio source***." Ex. 1005, 1:51-2:3. In fact, Bedingfield's synthetic audio signal is generated for one purpose only: "provid[ing] the listener with ***a sense of having a relative position with respect to the providing audio source***." *Id.*, 1:66-2:2. *see also* 4:9-12 ("***allowing a listener to sense the location*** (within the sound field) of the speaker through ***the modified audio signal presented to the listener***."). Bedingfield is clear that its synthetic audio signal is merely a "modified audio signal," (*Id.*, 4:7-12), wherein the modification allows "assign[ing] each participant a virtual position within a virtual sound field." *Id.*, 3:29-34; Ex. 2007, ¶29. Therefore, no POSITA would understand Bedingfield to teach, suggest, or disclose a voice of a computer program, sound synthesis, or a computer-synthesized voice, because "synthetic

audio placement"—which Bedingfield discloses—does no more than "placing participants within a sound field." Ex. 1005, 17:4-5; Ex. 2007, ¶¶16, 32.

Additionally, and for the reasons discussed in greater detail in § III.B.2.a.i, Petitioner's assertion that Bedingfield's conference call teaches a voice exchange between the computer program and a user, because it "includes a processed voice of a participant," (Pet. 57), directly contradicts the understanding provided by the '196 Patent for the voice of a computer program. In Bedingfield, all participants are human beings, not computer programs. Pet. 54 (depicting FIG. 1 of Bedingfield); *see also* Ex. 1005, FIGs. 17 and 18 (depicting human being for participants). Therefore, under the rules of *Toro Co.* and *SciMed Life Sys.*, when the '196 Patent specification states that voice exchange with a computer program does not include voices of any other people, there is no basis for the assertion that Bedingfield's conference call—which includes only voices of people—teaches the claim limitation.

For the reasons discussed in § III.B.2.a.i, Petitioner's obviousness analysis is fatally defective. Specifically, Petitioner has failed to identify what features of Bedingfield would need to be modified to include "a voice of a computer program," and explain how such modifications would work. Petitioner, however, attempt to cure this deficiency by making a conclusory statement that "a POSA would have had a reasonable expectation of success using such a voice [i.e., voice of a computer

program] in Bedingfield, to save time and cost, add flexibility, and improve clarity." Pet. 53. Aside from the conclusory nature of this statement, time, cost, and improved clarity have nothing to do with modifying the embodiments in Bedingfield to include a voice exchange with a computer program. Also, adding flexibility to vocal range is not related in any sense to showing how a POSITA would endeavor to modify Bedingfield—which focuses on placing a plurality of audio signals in a sound field—to include a voice of a computer program. These reasons provide no meaningful explanation as to how and why a POSITA could modify the embodiments in Bedingfield to arrive at the recitations of the independent claims.

In fact, no POSITA would be motivated to modify Bedingfield to include a voice of a computer program, for Bedingfield's system is designed for use by human participants—it is designed to "closely simulate an ***in-person conference setting***." Ex. 1005, 3:25-27. Bedingfield repeatedly discloses, both expressly and through various embodiments, that the audio signals being modified for synthetic placement are sounds originating from ***other human participants*** in the call. *Id.*, 3:25-24; 6:9-10 ("participants' voices or other audio"); FIGs. 1, 6, 16-17; Ex. 2007, ¶32. Bedingfield provides no teaching whatsoever that any of the human participants could be replaced with a computer program. In fact, such a hypothetical replacement is practically impossible, because Bedingfield requires the listener to talk with a human having or holding a communication device. As shown in FIG. 1 and

discussed in Bedingfield, each participant communicates with the listener via a communication device described as being a telephone, mobile phone, walkie-talkie, or VoIP device. Ex. 1005, 4:18-30. Petitioner provides no explanation whatsoever as to how a POSITA would replace these human participants and their communication devices with a computer program with whom the listener has a voice exchange.

Consider Bedingfield's walkie-talkie embodiment. Modifying Bedingfield to include a voice of a computer program requires solving many technical problems. For example, how and why would a walkie-talkie be modified to have a talking computer program when the entire purpose of a walkie-talkie is for a human to call another human.? Does the computer program push a button on the walkie-talkie in order to communicate to the listener? Where and how does Bedingfield assign the computer program loaded on a walkie-talkie a location relative to the listener when multiple other participants are in the conference call? The Petition is silent on these considerations.

Bedingfield fails to disclose, teach, or suggest a voice of a computer program as claimed, and Petitioner has failed to provide an explicit analysis in the Petition of how and why the prior art elements could be combined to arrive at the invention as claimed.

ii. Bedingfield does not teach, suggest, or disclose a voice exchange with the computer program

The Petition makes no argument whatsoever about a key claim element: "a ***voice exchange*** between a user and the computer program." As discussed in § III.B.2.a.ii, voice exchange with a computer program necessarily requires a two-way communication. That said, Bedingfield fails to teach, suggest, or disclose "a voice exchange between a user and the computer program." Accordingly, and for the reasons discussed in § III.B.2.a.ii, Petitioner's reference to "computerized text-to-speech synthesis," (Pet. 51), does not constitute voice exchange with a computer program. Given Bedingfield's silence on speech synthesis—which is requisite for the "voice exchange" limitation—the Ground 6 of the Petition is fatally defective, because it does neither "specify sufficiently where each element of each challenged claim is found" in Bedingfield. *In re EVERYMD.COM*, Paper 9, at 23-25; see also 37 C.F.R. § 42.104(b)(4), 42.22.

Petitioner fails to provide an explicit analysis of how and why a POSITA would be motivated to include the "voice exchange" capability with a computer program, and that a POSITA would have a reasonable expectation of success. Specifically, Petitioner has failed to identify what features of Bedingfield would need to be modified to include "voice exchange between a user and the computer program" and explain how such modifications would work.

b. Bedingfield fails to disclose or teach providing binaural sound to the user during the voice exchange between the computer program and the user such that an origin of the voice of the computer program occurs at the SLP at a first location of limitation 1[a]/8[a]

As an initial matter, Petitioner's obviousness analysis regarding this limitation should be rejected, because, as discussed in greater detail in §III.C.2.a, Bedingfield discloses neither a voice of a computer program, (*see* §III.C.2.a.i), nor a voice exchange with a computer program (*see* §III.C.2.a.ii). Therefore, Petitioner has failed to "specify sufficiently" where in Bedingfiled binaural sound is provided to the user "***during the voice exchange between the computer program and the user*** such that an origin of ***the voice of the computer program*** occurs at the SLP at a first location"—thus, Ground 6 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.C.2.a.

Further, and more important, Bedingfield does not teach or disclose binaural sound. Petitioner's only rationale for arguing that "Bedingfield provides binaural sound to the user" is that Bedingfield discloses "rendering a sound field and providing synthetic audio placement using both ears." Pet. 58. This is wrong for several reasons. *First*, in its petition in the case of IPR2023-1003 (Paper 2), where Petitioner relied on Bedingfield to challenge another 8KHZ's patent (U.S. Pat. 9,226,090—which is the parent of the '196 Patent (*see* Ex. 1001, code 63)), both

Petitioner and its expert admitted that Bedingfield does not disclose binaural sound: "***Bedingfield generally discloses all independent claim limitations, except for capturing binaural sound[.]***" Ex. 2010, 12. The Board should hold Petitioner to that representation here as well. *Second*, the term "binaural sound," or any of its equivalent, such as, "3D sound" and "spatial sound," does not appear in Bedingfield.

Third, Bedingfield does not disclose binaural sound under Petitioner's expert's own reasoning, and is fundamentally incapable of being modified to include it. As Petitioner's expert explains in his declaration, a POSITA understands a prior art reference disclosing binaural sound either when the reference discloses recording sound via "using two microphones that are spaced at the same distance as the width of a human head," (Ex. 1003, ¶52), or, alternatively, when the reference discloses processing non-binaural sound with head-related transfer functions ("HRTFs") (*Id*., ¶53). Ex. 2007, ¶¶19-22.

Bedingfield discloses neither. *Id.*, ¶30 ("Nowhere does Bedingfield indicate the use of HRTF filtering, binaural processing, or interaural time delay."). Bedingfield is clear that its system uses only one microphone to capture the voice of a participant in the conference call. *See, e.g.*, Ex. 1005, 4:7-12 ("[T]he multi-channel audio communication system may render single channel ***sound detected by a speaker's microphone*** into a synthetic audio placement allowing a listener to sense the location[.]"); 11:1-6 ("[T]he computing device may include a monitor 1104, a

keyboard 1106, a mouse 1108, a camera or other position sensor 1112, and ***a combined microphone input*** and speaker output 1110."); 15:12-15 ("[T]he single channel signal ***detected by the microphone utilized by participant 104*** is modified to create a synthetic audio placement when received by the listener 1602."). Therefore, Bedingfield cannot possibly disclose binaural sound. Even, Petitioner's expert in the parallel district court proceeding admits that "[a]s you know, ***binaural sounds need to have two microphones***." Ex. 2009, 184.

Further, Bedingfield does not disclose processing non-binaural sound using HRTFs. Ex. 2007, ¶30. As Dr. Begault states in his reference book, which Petitioner's expert in the parallel district court proceeding "***definitely regard[s] this as a seminal reference,***" (Ex. 2009, 17), absent HRTF filters, there can be no binaural sound.

> While this book mainly uses the phrase "3-D sound," equivalent designations include ***virtual acoustics***, ***binaural audio***, and ***spatialized sound***. It's certain that as new products appear on the market, further variants on these phrases will appear. Fundamentally, all of these refer to techniques where the outer ears (the pinnae) are either directly implemented or modeled as digital filters. ***By filtering a digitized sound source with these filters***, one can potentially place sounds anywhere in the virtual space about a headphone listener.

Ex. 1036, x. Ex. 2007, ¶21-22 ("To do so [i.e., to create a computer voice in 3D space in more than one fixed position], one must use digital filtering representing binaural HRTFs."). Therefore, because Bedingfield does not teach, suggest, or disclose binaural sound, and because Petitioner fails to show that it does with sufficient specificity, Ground 6 of the Petition is fatally defective.

c. Bedingfield fails to disclose or teach moving the SLP of the voice of the computer program of limitation 1[b]/8[b]

Petitioner's obviousness analysis regarding this limitation should be rejected, because, as discussed in greater detail in §III.C.2.a, Bedingfield does not disclose a voice of a computer program. *See* §III.B.2.a.i. Therefore, Petitioner has failed to "specify sufficiently" where in Bedingfield binaural sound is provided to the user "moving the SLP of ***the voice of the computer program***" is found—thus, Ground 6 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.C.2.a.

d. Bedingfield fails to disclose or teach moving, during the voice exchange between the computer program and the user, the SLP of the voice of the computer program of limitation 1[c]/8[c]

Petitioner's obviousness analysis regarding this limitation should be rejected, because, as discussed in greater detail in §III.C.2.a, Bedingfield discloses neither a

voice of a computer program, (*see* §III.C.2.a.i) nor a voice exchange with a computer program (*see* §III.C.2.a.ii). Therefore, Petitioner has failed to "specify sufficiently" where in Bedingfield "moving, during the voice exchange between the computer program and the user, the SLP of the voice of the computer program" is found—thus, Ground 6 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.C.2.a.

e. Bedingfield fails to disclose or teach providing binaural sound to the user during the voice exchange between the computer program and the user such that an origin of the voice of the computer program occurs at the SLP at the second location of limitation 1[d]/8[d]

Petitioner's obviousness analysis should be rejected, because, as discussed in greater detail in §III.C.2.b, Bedingfield discloses none of a voice of a computer program, (*see* §III.C.2.a.i), a voice exchange with a computer program (*see* §III.C.2.a.ii), and binaural sound (§III.C.2.b). Therefore, Petitioner has failed to "specify sufficiently" where in Bedingfield ***binaural sound is provided*** to the user "***during the voice exchange between the computer program and the user*** such that an origin of ***the voice of the computer program*** occurs at the SLP at the second location"—thus, Ground 6 of the Petition is fatally defective. *See In re EveryMD.com, LLC*, Paper 9, at 23-25; *see also* 37 C.F.R. §§42.104(b)(4), 42.22; §III.C.2.b.

3. Bedingfield fails to disclose, teach, or suggest several limitations of independent claim 15, nor does it render obvious claim 15

a. Bedingfield fails to disclose or teach moving a SLP of a voice of a computer program during a voice exchange between the computer program and a user of limitation 15[pre][8]

This preamble would not have been obvious over the prior art for the same reason as preambles 1[pre]/8[pre].

b. Bedingfield fails to disclose or teach providing the voice of the computer program of limitation 15[a]

This limitation would not have been obvious over the prior art for the same reason as limitations 1[a]/8[a].

c. Bedingfield fails to disclose or teach moving the SLP of the voice of the computer program and providing binaural sound during the voice exchange between the computer program and the person such that an origin of the voice of the computer program occurs at the SLP at the second location of limitation 15[c]

This limitation would not have been obvious over the prior art for the same reason as limitations 1[b]/8[b] and 1[e]/8[8].

[8] By rebutting Petitioner's argument vis-à-vis the preamble, 8KHZ does not concede that the preamble is a limitation and reserves the right to contend that the preamble is not a limitation of the claim.

Because Bedingfield fails to disclose, teach, or suggest the several limitations of independent claims 1, 8, and 15 discussed above, and does not render obvious claims 1, 8, and 15, institution based on Ground 6 should be denied.

4. All Remaining Claims That Rely on Bedingfield Fail for the Same Reasons

Because all other Challenged Claims of Grounds 6-10 depend from independent claims 1, 8, or 15, and rely on Bedingfield for at least the teachings of the several limitations of claims 1, 8, or 15 above, these claims are not rendered obvious by Bedingfield, alone or in view of other asserted prior art references.

IV. The Board Should Exercise Discretion Under 35 U.S.C. §314 to Deny Institution

Institution of *inter partes* review is always discretionary. 35 U.S.C. §314(a). The Board should exercise its discretion under §314(a) to deny institution here.

A. The Board should exercise its discretion to deny institution of this Petition.

The Board should deny institution under §314(a) in view of its precedential decisions in *NHK Spring*[9] and *Fintiv*[10] because the district court and parties have already expended substantial time and resources, a stay is unlikely, and a final written decision ("FWD") in this proceeding is expected no earlier than January 2025, at least five months after the jury trial begins in August 2024. The '196 Patent is involved in the related matter, (Pet. 3), that involves the same issues, arguments, and evidence that Petitioner has presented in the Petition. Petitioner gives little attention to the discretionary issues in the Petition and provides no *Sotera* stipulation resulting in an overlap of invalidity issues. Pet. 80. Duplicating the district court's efforts would not be an efficient use of the Board's resources and would not serve to fulfill the primary purpose of AIA proceedings: to provide a practical and efficient alternative to district court litigation.

In *NHK Spring* the Board denied institution primarily because the related district court case was nearing its final stages and would resolve all the issues before

[9] *NHK Spring Co., Ltd., v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sep. 12, 2018) (precedential).

[10] *Apple Inc. v. Fintiv, Inc*., IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) ("*Fintiv*") (precedential).

the Board. *NHK Spring*, Paper 8 at 20; *see also id.*, 11-18 (applying discretion under 35 U.S.C. §325(d)). Other cases—relying on *NHK Spring*—have also denied institution. For example, in *E-One, Inc. v. Oshkosh Corp.*, the Board applied *NHK Spring*'s analysis under 35 U.S.C. §314(a) to deny institution. IPR2019-00161, Paper 16 (PTAB May 15, 2019). In *E-One*, the Board reasoned:

> [i]n the § 314(a) portion of its analysis, [*NHK Spring*] noted that a district court proceeding involving the same patent was scheduled to go to trial before a final decision would have been due in the Board proceeding, and the Board proceeding would involve the same claim construction standard, the same prior art references, and the same arguments as in the district court.

Id., 6. In both *NHK Spring* and *E-One*, factors warranting a denial of institution included: the district court investing considerable time and resources to handle the same issues presented in the IPR, and trials that were scheduled to be completed prior to a Board's FWD. The facts here warrant denial just as decided in *NHK Spring* and *E-One*. Further, the Petition will not serve as an "effective and efficient alternative" to litigation, frustrating a primary objective of the AIA. *Gen. Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017) (precedential).

In *Fintiv*, the Board emphasized six factors to consider under *NHK Spring* which are discussed below. *See Fintiv*, Paper 11 at 5-16. The Board stated that "[t]hese factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding." *Id.*, 6. Here, each of these factors favors denial of institution of this Petition. Because the overall balance of factors favors denial of institution, the Board should apply its discretion under 35 U.S.C. §314(a) to deny institution of the requested proceeding.

1. Factor 1 weighs against institution, because no court has granted a stay and no evidence exists that a stay may be granted.

The parallel district court proceeding has not been stayed. That proceeding includes a total of nine patents-in-suit, and Petitioner has filed Petitions against all patents-in-suit. The motion for inter-district transfer noted in the Petition (Pet. 80.) was recently denied. Ex. 2015.

The district court has not indicated whether it would grant a stay if *inter partes review* is instituted, and the Board should decline to speculate whether the district court would grant a stay in this proceeding. *See, eClinicalWorks, LLC v. Decapolis LLC*, IPR2022-00229, Paper 10 at 8 (April 13, 2022) ("We will not attempt to predict, based on the facts in allegedly similar prior situations, how the Texas District Court would rule should a stay be requested in the WDTX Cases.").

There is no evidence a stay may be granted if trial is instituted. This factor is at least neutral or weighs in favor of discretionary denial of institution.

2. Factor 2 weighs against institution, because trial in the district court is scheduled to begin months before the final written decision deadline.

Trial is set to begin in the parallel district court proceeding in August 2024. E. 2001 at 3. This date has remained unchanged. This trial date is currently at least five (5) months before an expected January 2025 FWD would issue in this IPR. Proceedings with similar substantial gaps between trial and FWD have found Factor 2 weighs in favor of denying institution. *See GlobalFoundries Inc. v. UNM Rainforest Innovations*, IPR2020-00984, Paper 11 at 11-16 (PTAB Dec. 9, 2020) (finding that a scheduled trial date four months before the statutory deadline for a final written decision was a factor weighing in favor of discretionary denial); *NanoCellect Biomedical, Inc. v. Cytonome/ST, LLC*, IPR2020-00551, Paper 19 at 16 (PTAB Aug. 27, 2020) (same); *U.S. Venture, Inc. v. Sunoco Partners Marketing & Terminals, L.P.*, IPR2020-00728 Paper 10 at 9 (PTAB October 1, 2020) (three or four months before issuance of final written decision). Here, just as in *NHK Spring*, "[i]nstitution of an inter partes review under these circumstances would not be consistent with 'an objective of the AIA … to provide an effective and efficient alternative to district court litigation.'" *NHK Spring*, Paper 8 at 20. As the Board recognized in *Fintiv*, "[i]f the court's trial date is earlier than the projected statutory

deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*." *Fintiv*, IPR2020-00019, Paper 11 at 9.

Importantly, there is no evidence that the parties' trial will be extended, let alone delay of trial would extend past the statutory deadline for the FWD. *See Cisco Systems, Inc. v. Oyster Optics,* LLC, IPR2021-00319, Paper 9 at 10-12 (PTAB Jun. 8, 2021) (weighing *Fintiv* factor 2 in favor of exercising discretion to deny Petition).

In sum, there is no reason to believe the August 2024 trial will be postponed. *See Fintiv,* Paper 11 at 13 ("We generally take courts' trial schedules at face value absent some strong evidence to the contrary."); *see also, Cisco Systems, Inc. v. Monarch Networking Solutions, LLC*, IPR2020-01227, Paper 11 at 9-11 (PTAB Mar. 4, 2021) (declining to speculate whether the district court will grant the pending motion to transfer and weighing *Fintiv* factor 2 in favor of denial of institution).[11]

[11] This timing continues to hold under the guidance in the Director's June 21, 2022, memo titled "Interim Procedures for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation" ("Fintiv Memo;" Ex. 2004). The Fintiv Memo directs the Board to "consider the median time from filing to disposition" in the district court (Ex. 2004 at 3), which for patent cases in the Western District of Texas is 25.4 months (Ex. 2005), and for patent cases before Judge Albright is 24.7 months (Ex. 2006). Counting from the June 3, 2022, filing

Without a stay pending IPR, litigation continues, and there will be a continued expenditure of court resources. This factor weighs in favor of discretionary denial of institution.

3. Factor 3 weighs against institution, because the court and parties have and will continue to invest significant time and resources in the parallel proceeding.

The district court action was filed June 3, 2022, and served June 13, 2022. A scheduling order has been in place since November 14, 2022. The Petition was filed on June 9, 2023. Pet. 80. Since then, the district court and parties have invested significant time and resources. In *Fintiv*, the Board stated, "if, at the time of the institution decision, the district court has issued substantive orders related to the patent at issue in the petition, this fact favors denial. Likewise, district court claim construction orders may indicate that the court and parties have invested sufficient time in the parallel proceeding to favor denial" of institution. *Fintiv*, Paper 11 at 9-10. Further, "[t]his investment factor is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support

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of the parallel district court case results in an average time to trial before the end of August 2024, precisely in line with the scheduled August 2024 trial and roughly five months before any expected FWD here.

the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs." *Id.*, 10.

The investment by the parties and the court will be significant by the time either an institution decision or a FWD is issued. Petitioner waited nearly a full year—literally at the last minute—to file this Petition. ***Prior*** to filing this POPR, the parties have (1) completed Claim Construction briefing after depositions, (2) received the Court's ruling on Petitioner's motion to transfer after related discovery and depositions, (3) conducted the Markman hearing, and (4) received claim constructions (the Court's procedure is to provide preliminary construction shortly in advance of the Markman hearing and then provide final constructions at the hearing). Ex. 2003 (setting Markman hearing for October 3, 2023).

By the time an institution decision is rendered in January 2024, the parties will have (1) exchanged Final Infringement and Invalidity Contentions, and (2) engaged in a substantial portion of fact discovery, which opened October 5, 2023 and closes within four months thereafter. Ex. 2003 [order moving Markman hearing]; Ex. 2002 [8/30/23 scheduling order] at 2. Further, the fact that the parallel district court proceeding opens fact discovery just weeks after claim construction does not change this analysis. *Universal Elecs., Inc. v. Universal Remote Control, Inc*., 943 F. Supp. 2d 1028, 1031-32 (C.D. Cal. 2013) ("That the schedule in this case set discovery to occur after claim construction does not mean that the case

remains in its procedural infancy until discovery is well underway."). The district court action has and will proceed with significant costs to 8KHZ by the time an institution decision is rendered. This factor weights in favor of discretionary denial of institution.

4. Factors 4-6 weigh against institution, because there is significant overlap between this IPR and district court proceedings, the parties involved are the same, and the asserted grounds fail.

The dispute in this proceeding and the district court case involves the same parties and overlapping issues. (Factors 4 and 5). Petitioner and 8KHZ are parties in the parallel district court litigation. Petitioner has presented substantially the same art and grounds of unpatentability in this Petition that it is asserting in the district court case – that the claims of the '196 Patent are allegedly obvious over at least the prior art Bedingfield, Li, and Ballas. Ex. 2001 at 12, 54-87. Thus, the claims and prior art addressed by PTAB will not materially differ from what is being addressed in the parallel district court litigation. Further, as discussed above, there are blatant contradictions between the present Petition and Defendants' Invalidity Contentions in district court. Conducting proceedings in both the PTAB and district court with differing claim constructions and substantially similar prior art creates the potential of two different outcomes, leading to inconsistent results.

Petitioner has also not stipulated or withdrawn any invalidity positions raised at the district court that are also brought before the Board. Importantly, Petitioner has failed to make a stipulation in the Petition in full accordance with *Sotera* and has not filed such a stipulation in the district court.

Because the district court will address substantially the same issues, arguments, and evidence months before the Board's FWD would be due, instituting review here would not efficiently use the Board's resources, nor would it be an effective and efficient alternative to district court litigation.

The Board noted in *Fintiv* with respect to Factor 6 that:

> [I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution…. [I]f the merits of the grounds raised in the petition are a closer call, then *that fact has favored denying institution* when other factors favoring denial are present.

Fintiv, IPR2020-00019, Paper 11 at 14-15. As shown above, the Petition fails on the merits for numerous reasons. These weaknesses, and the Factors addressed above, weigh in favor of discretionary denial of institution.

V. CONCLUSION

For the foregoing reasons, institution of this IPR should be denied.

Date: October 11, 2023

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that the foregoing Patent Owner's Preliminary Response contains 13,528 words using the word count feature of Microsoft Word.

Dated: October 11, 2023

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), the undersigned hereby certifies that the above-captioned Eight KHZ LLC's Patent Owner Preliminary Response, and its cited exhibits, were served via electronic mail, as authorized by Petitioner's Mandatory Notices, on June 9, 2023 at the following email correspondence addresses of record:

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