

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY GROUP CORP. (JAPAN), SONY CORP. OF AMERICA, SONY
INTERACTIVE ENTERTAINMENT LLC, SONY PICTURES
ENTERTAINMENT INC., SONY ELECTRONICS INC.,
and VERANCE CORP.,
Petitioner,

v.

MZ AUDIO SCIENCES, LLC,
Patent Owner.

IPR2022-01544
Patent 7,289,961 B2

Before KARL D. EASTHOM, DAVID C. MCKONE, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

Opinion for the Board filed by Administrative Patent Judge EASTHOM.

Opinion Dissenting filed by Administrative Patent Judge MCKONE.

EASTHOM, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

Sony Group Corp. (Japan), Sony Corp. of America, Sony Interactive Entertainment LLC, Sony Pictures Entertainment Inc., Sony Electronics Inc., and Verance Corp. (collectively “Petitioner”) filed a Petition requesting *inter partes* review of claims 1–10 of U.S. Patent No. 7,289,961 B2 (Ex. 1001, “the ’961 patent”). Paper 7 (“Pet.”).¹ MZ Audio Sciences, LLC (“Patent Owner”) timely filed a Preliminary Response. Paper 11 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. See 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020). Institution of an *inter partes* review requires that “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). For the reasons set forth below, we determine that there is a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim. Accordingly, we institute an *inter partes* review of the ’961 patent.

I. BACKGROUND

A. Related Matters

The parties indicate that Patent Owner asserted the ’961 patent in district court lawsuits, including *MZ Audio Sciences, LLC v. Sony Group Corp. (Japan)*, No. 1:21-cv-0166 (D. Del.), and *MZ Audio Sciences, LLC v. Sony Group Corp. (Japan)*, 2:22-cv-00866 (C.D. Cal.). Pet. xi; Paper 9, 1. The parties identify no other related proceedings.

¹ The Petition also identifies Sony Interactive Entertainment Inc. and Sony DADC US Inc. as real parties in interest and states “other Sony affiliates could be real parties in interest.” Pet. xi.

B. The Asserted Grounds

Petitioner asserts the following grounds of unpatentability (Pet. 2):

Claim(s) Challenged	35 U.S.C. ² §	Reference(s)/Basis
1–10	103(a)	Srinivasan ³ , Cabot ⁴ , Kudumakis ⁵
2, 3, 5, 7, 8, 10	103(a)	Srinivasan, Cabot, Kudumakis, Hobson ⁶
1–10	103(a)	Kudumakis, Tilki ⁷ , Cabot

In support, Petitioner relies on the testimony of Dr. Michael Scordilis (Ex. 1003).

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103 (effective Mar. 16, 2013). Petitioner points out that “[t]he application from which U.S. Patent No. 7,289,961 issued claims priority to U.S. Provisional Application No. 60/479,438, filed June 19, 2003.” Pet. xi. Because the earliest possible effective filing date for the ’961 patent precedes the effective date of the applicable AIA amendment, the pre-AIA version of § 103 applies.

³ Srinivasan, US 6,272,176 B1, issued Aug. 7, 2001. Ex. 1005.

⁴ R. C. Cabot et al., *Detection of Phase Shifts in Harmonically Related Tones*, J. AUDIO ENG. SOC., VOL. 24, NO. 7 (Sept. 1976). Ex. 1006.

⁵ Kudumakis et al., Int. Pub. WO 01/58063, published Aug. 9, 2001. Ex. 1007.

⁶ Hobson et al., US 6,633,653 B1, issued Oct. 14, 2003, filed Feb. 4, 2000. Ex. 1042.

⁷ J.F. Tilki et al., *Encoding a Hidden Auxiliary Channel onto a Digital Audio Signal Using Psychoacoustic Masking*, PROCEEDINGS IEEE SOUTHEASTCON ’97, “Engineering the New Century,” Apr. 12–14, 1997. Ex. 1008; *see also* Pet. 52–53 (arguing that Tilki is prior art under §§ 102(a)–(b)) (citing Ex. 1025, 1–8; Ex. 1026, 1–2; Ex. 1027, 2; Ex. 1030, 1–2; Ex. 1032, 48; Ex. 1033, 2719).

C. The '961 Patent

The '961 patent relates to embedding data in an audio signal for watermarking, steganography, or other purposes. Ex. 1001, code (57). The process divides the audio signal into time frames that contain frequency bands representing the audio signal. *Id.* Then, “the relative phases of one or more frequency bands are shifted to represent the data to be embedded.” *Id.*

D. Challenged Claims

Petitioner challenges all ten claims of the '961 patent. Of these, claims 1, 4, 6, and 9 are independent. For purposes of this Institution Decision, claim 1 is representative. Claim 1 follows (information added to conform to Petitioner’s nomenclature):

1. [1PRE] A method for embedding data in an audio signal, the method comprising:

[1A] (a) dividing the audio signal into a plurality of time frames and, in each time frame, a plurality of frequency components;

[1B] (b) in each of at least some of the plurality of time frames, selecting at least two of the plurality of frequency components; and

[1C] (c) altering a phase of at least one of the plurality of frequency components in accordance with the data to be embedded, wherein:

[1D] step (b) comprises selecting a fundamental tone and at least one overtone; and

[1E] step (c) comprises quantizing a phase difference of the at least one overtone relative to the fundamental tone to embed at least one bit of the data to be embedded.

II. DISCRETIONARY DENIAL

Patent Owner contends that we should exercise our discretion under 35 U.S.C. § 325(d) to deny institution. Prelim. Resp. 63–66.

A. Legal Standard for Exercising Discretion under Section 325(d)

The Board has discretion to deny a petition. *See, e.g.*, 35 U.S.C. § 325(d); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”). The PTAB’s Trial Practice Guide identifies considerations that may warrant exercise of this discretion. Consolidated Trial Practice Guide, 55–63 (Nov. 2019) (“Consolidated TPG”).⁸

The Board may discretionarily deny institution of an *inter partes* review when a petition presents “the same or substantially the same prior art or arguments [that] previously were presented to the Office.” 35 U.S.C. § 325(d); *see also* 37 C.F.R. § 42.4(a) (the Board institutes trial on behalf of the Director). To evaluate whether such a denial is appropriate, the Board determines

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2)
- if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). This two-part *Advanced Bionics* framework involves evaluating the following non-exclusive factors:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between

⁸ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

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