

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
META PLATFORMS TECHNOLOGIES, LLC, and
TWISTED PIXEL GAMES, LLC,
Petitioner,

v.

EIGHT KHZ, LLC,
Patent Owner.

IPR2023-01021
Patent 10,917,737 B2

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

BROWNE, *Administrative Patent Judge*.

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

I. INTRODUCTION

Meta Platforms, Inc., Meta Platforms Technologies, LLC, and Twisted Pixel Games, LLC (“Petitioner”) filed a Petition (Paper 2 (“Pet.”)), seeking *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 10,917,737 B2 (Ex. 1001 (“the ’737 patent”)). See Pet. 1. Eight KHZ, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). With our prior authorization (Ex. 1144), Petitioner filed a Preliminary Reply (Paper 7, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-Reply (Paper 8, “Prelim. Sur-reply”).

Institution of an *inter partes* review is authorized by statute 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); see 37 C.F.R. § 42.108. Upon consideration of the Petition and Preliminary Response we conclude that the information presented shows that there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one challenged claim of the ’737 patent.

A. *Related Matters*

The parties indicate that the ’737 patent is involved in *Eight kHz, LLC v. Meta Platforms, Inc.; Meta Platforms Technologies, LLC; Twisted Pixel Games, LLC*, 6:22-cv-00575-ADA (W.D. Tex. 2022) (“the related District Court litigation”). Pet. 71; Paper 4.

The parties identify U.S. Application Nos. 17/988,808 and 17/169,481 as applications related to the ’737 patent. Pet. 71; Paper 4. Petitioner additionally identifies U.S. Application Nos. 62/348,164, 15/365,880,

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15/429,131, and 15/635,166 as applications related to the '737 patent.
Pet. 71.

Patent Owner identifies U.S. Patent Nos. 9,800,990, 9,699,583, and 9,749,766 as patents related to the '737 patent. Paper 4.

Additionally, the following proceedings before the Board involve the same parties as the instant proceeding: IPR2023-01003 (U.S. Patent No. 9,226,090 B1), IPR2023-01004 (U.S. Patent No. 9,282,196 B1), IPR2023-01005 (U.S. Patent No. 9,674,628 B1), IPR2023-01019 (U.S. Patent No. 10,368,179 B1), IPR2023-01020 (U.S. Patent No. 10,448,184 B1), IPR2023-01022 (U.S. Patent No. 11,172,316 B2), IPR2023-01023 (U.S. Patent No. 10,798,509 B1), and IPR2023-01024 (U.S. Patent No. 11,290,836 B2).

B. The '737 Patent (Ex. 1001)

The '737 patent, for “Defining a Zone with a HPED and Providing Binaural Sound in the Zone,” relates to three-dimensional (“3D”) sound localization. Ex. 1001, code (54), 1:7–18. The '737 patent discloses a handheld portable electronic device (“HPED”) that “defines a zone that extends from a floor and around a user wearing a wearable electronic device ([“]WED[”]) and “designates a location in the zone for where binaural sound originates to the user.” *Id.*, code (57). The '737 patent further discloses that “[s]ounds are assigned to different zones or different sound localization points ([“]SLPs[”]) and are convolved so the sounds localize as binaural sound into the assigned zone or to the assigned SLP.” *Id.* at 1:23–26. To process or convolve the sounds, the '737 patent uses sound localization information (“SLI”) that may include, for example, head related transfer functions (“HRTFs”). *Id.* at 5:38–40, 6:21–40.

C. Challenged Claims

Petitioner challenges claims 1–20 of the '737 patent. Pet. 4–70. Of the challenged claims, claims 1, 8, and 14 are independent. Independent claim 1 is reproduced below with Petitioner's labeling of the limitations for ease of reference.

1. 1[pre] A method executed by one or more electronic devices, the method comprising:

1[a] tracking, with a wearable electronic device (WED) worn on a head of a user, movement of a handheld portable electronic device (HPED) held in a hand of the user such that the movement of the HPED defines a size and a shape of a three-dimensional (3D) zone that extends from a physical floor and around the user;

1[b] designating, with the HPED held in the hand of the user, a sound localization point (SLP) in empty space in the zone above the physical floor from where binaural sound originates to the user;

1[c] tracking, with the WED worn on the head of the user, the HPED held in the hand of the user such that the HPED provides a location to the WED of the SLP in empty space in the zone above the physical floor from where the binaural sound originates to the user;

1[d] processing, by a processor, sound with head-related transfer functions (HRTFs) to generate the binaural sound that externally localizes to the user at the location of the SLP in empty space in the zone above the physical floor; and

1[e] displaying, with the WED worn on the head of the user, a virtual image at the location of the SLP in empty space in the zone above the physical floor from where the binaural sound originates to the user.

Ex. 1001, 66:7–32.

D. The Alleged Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 2):¹

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	103	Pedrotti, ² Jang, ³ Begault ⁴
1–20	103	McCulloch, ⁵ Pedrotti, Flaks ⁶

E. Evidence

In support of its proposed grounds, Petitioner relies on the Declaration of Gregory F. Welch, Ph.D. (“Dr. Welch”). In support of its Preliminary Response, Patent Owner relies on the Declaration of John C. Hart, Ph.D. (“Dr. Hart”). In our analysis below, we consider Dr. Welch’s and Dr. Hart’s testimony.

II. ANALYSIS

A. Discretion under 35 U.S.C. § 314(a)

Patent Owner argues that we should exercise discretion under § 314(a) to deny institution in light of the related District Court litigation. Prelim. Resp. 34–43.

We consider the following factors when determining whether to deny institution under § 314(a) based on a parallel district court proceeding:

¹ Petitioner supports its challenge with the Declaration of Dr. Gregory F. Welch. Ex. 1003.

² U.S. Patent No. 9,851,786 B2, filed July 7, 2015, issued December 26, 2017 (Ex. 1005, “Pedrotti”).

³ U.S. Patent No. 8,520,872 B2, issued August 27, 2013 (Ex. 1006, “Jang”).

⁴ DURAND R. BEGAULT, NAT’L AERONAUTICS AND SPACE ADMIN., 3D SOUND FOR VIRTUAL REALITY AND MULTIMEDIA (2000) (Ex. 1007, “Begault”).

⁵ U.S. Patent No. 9,041,622 B2, issued May 26, 2015 (Ex. 1008, “McCulloch”).

⁶ U.S. Patent No. 8,767,968 B2, issued July 1, 2014 (Ex. 1009, “Flaks”).

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