

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.

IPR2023-01022
Patent 11,172,316 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. 11,172,316 B2 (Ex. 1001 (“the ’316 patent”)). See Pet. 2. Eight KHZ, LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With our prior authorization (Ex. 1144), Petitioner filed a Preliminary Reply (Paper 8, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-Reply (Paper 9, “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 ’316 patent.

A. Related Matters

The parties indicate that the ’316 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 5.

The parties identify U.S. Application No. 17/520,584 as an application related to the ’316 patent. Pet. 71; Paper 5. Petitioner additionally identifies U.S. Application Nos. 15/049,071, 15/424,901,

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15/944,796, 16/162,416, 16/445,268, 16/558,078, and 16/938,936 as applications related to the '316 patent. Pet. 71.

Patent Owner identifies U.S. Patent Nos. 10,798,509, 10,728,682, 10,602,291, 10,440,489, 10,117,037, 9,980,072, and 9,591,427 as patents related to the '316 patent. Paper 5.

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), IPR2023-01021 (U.S. Patent No. 10,917,737 B2), IPR2023-01023 (U.S. Patent No. 10,798,509 B1), and IPR2023-01024 (U.S. Patent No. 11,290,836 B2).

B. The '316 Patent (Ex. 1001)

The '316 patent, for a “Wearable Electronic Device Displays a 3D Zone from Where Binaural Sound Emanates,” relates to “creat[ing] and maintain[ing] virtual environments, virtual reality, and augmented reality.” Ex. 1001, code (54), 1:7–23. According to the '316 patent, Head Related Transfer Functions (“HRTFs”) may be used to artificially create localized binaural sound, but HRTFs vary depending on various individual physiological traits and are difficult to measure and obtain. *Id.* at 1:7–23. The '316 patent seeks to obtain more accurate HRTFs and “accurately localize binaural sound.” *Id.* at 2:59–65.

The '316 patent discloses a portable electronic device (“PED”) that “divides an area around a user into a three-dimensional ([‘]3D[’]) zone” and a head-worn device that displays the zone when the head-worn device

detects that the user is leaving the zone and “plays binaural sound that emanates to the user from sound localization points ([‘]SLPs[’]) inside the zone.” Ex. 1001, code (57).

C. Challenged Claims

Petitioner challenges claims 1–20 of the ’316 patent. Pet. 2–70. Of the challenged claims, claims 1, 9, and 17 are independent. Independent claim 1 is illustrative of the challenged claims and is reproduced below with Petitioner’s labeling of the limitations for ease of reference.

1. 1[pre] A method comprising:

1[a] dividing, with a portable electronic device (PED) held in a hand of a user, an area around the user into a zone that extends around the user and that includes a sound localization point (SLP) from where binaural sound in empty space originates to the user;

1[b] playing, with speakers in a wearable electronic device (WED) worn on a head of the user, the binaural sound that originates from the SLP in empty space;

1[c] tracking, with one or more sensors in the WED worn on the head of the user, the PED to determine when the PED held in the hand of the user is moving outside the zone that extends around the user; and

1[d] displaying, with the WED worn on the head of the user, a virtual reality (VR) image that shows the zone in response to the WED determining that the PED is moving outside the zone.

Ex. 1001, 40:57–41:6.

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.47–55.

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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