UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

K/S HIMPP, Petitioner,

v.

BENHOV GMBH, LLC, Patent Owner.

Case IPR2017-00930 Patent 8,170,884 B2

Before BARBARA A. PARVIS, DANIEL N. FISHMAN, and CHARLES J. BOUDREAU, Administrative Patent Judges.

FISHMAN, Administrative Patent Judge.

DOCKET

FINAL WRITTEN DECISION 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 and DECISION DENYING PATENT OWNER'S MOTION TO EXCLUDE 37 C.F.R. § 42.64

I. INTRODUCTION

K/S HIMPP ("Petitioner"), filed a Petition (Paper 2, "Pet.") for *inter partes* review of claims 1–17 (the "challenged clams") of U.S. Patent No. 8,170,884 B2 ("the '884 patent") (Ex. 1001) pursuant to 35 U.S.C. §§ 311– 319. Benhov GmbH, LLC ("Patent Owner") filed a Patent Owner Preliminary Response (Paper 6, "Prelim. Resp."). On August 14, 2017, based on the record before us at that time, we instituted an *inter partes* review of *only* claims 9–13 and 17 (denying review of claims 1–8 and 14– 16). Paper 9 ("Decision" or "Dec."), 40.

Patent Owner filed a Patent Owner Response (Paper 12, "Response" or "PO Resp.") and Petitioner filed a Reply (Paper 14, "Pet. Reply"). Petitioner relies on Declarations of Sayfe Kiaei, Ph.D. (Exs. 1003, 1017) and Patent Owner relies on a Declaration of David V. Anderson, Ph.D. (Ex. 2003).

Responsive to the Supreme Court's decision in *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348 (2018), we issued an Order modifying our Decision to institute review of all claims and all grounds. Paper 27 ("SAS Order"). In the SAS Order, we authorized additional briefing to address issues relating to claims 1–8 and 14–16. Petitioner filed an authorized Supplemental Reply (Paper 29, "Supp. Reply"), Patent Owner filed an authorized Supplemental Response (Paper 30, "Supp. Resp."), and Petitioner filed an authorized Sur-Reply (Paper 31).

Oral Argument was conducted on April 30, 2018 and a transcript of that hearing is of record. Paper 28 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6. The Petitioner has the burden of proving unpatentability by a preponderance of the evidence. *See*

35 U.S.C. § 316(e); *see also* 37 C.F.R. § 42.1(d). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons expressed below, we conclude that Petitioner has shown by a preponderance of the evidence that claims 9–13 and 17 are unpatentable. Petitioner has not persuaded us by a preponderance of the evidence that claims 1–8 and 14–16 are unpatentable.

A. The '884 Patent

According to the '884 patent, high-end audio systems include multi-channel amplifiers coupled with multi-speaker systems. Ex. 1001, 1:38–39. Such systems typically include a "center" channel and allow some limited capability to adjust the volume of the center channel independent of other channels. *Id.* at 1:40–43. Further according to the '884 patent, many movies use the center channel for dialog (voice audio signals) and use the other channels for other sound effects. *Id.* at 1:43–44. The adjustment capability of high-end systems, though limited, allows a user to adjust the voice/dialog volume independent of the other audio (i.e., remaining audio signals) to make the dialog more intelligible relative to other, remaining audio such as loud sound effects. *Id.* at 1:45–47.

The '884 patent discloses the high cost of such high-end systems renders adjustment features inaccessible to many people. *Id.* at 1:49–57. Further, the '884 patent discloses that an adjustment suitable for one listener could be unsuitable for other listeners in the same room. *Id.* at 1:58–64. The '884 patent additionally discloses that a static adjustment of the center (dialog/voice) channel that is suitable for one portion of, for example, a

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movie may be unsuitable for a different portion of the movie. *Id.* at 1:65–2:5.

The '884 patent purports to resolve these problems by providing a voice to remaining audio ("VRA") adjustment capability in a personal listening device ("PLD") for each of multiple users that permits each user to independently adjust the voice audio signal independent of adjustments to the remaining audio signals. *See id.* at 2:64–3:4. According to the '884 patent, the invention discloses a system that allows each individual PLD user to adjust a received voice audio signal relative to received remaining audio signals. *Id.* at 8:27–43. Figures 1 and 2, reproduced below, depict an environment in which the invention is applied.

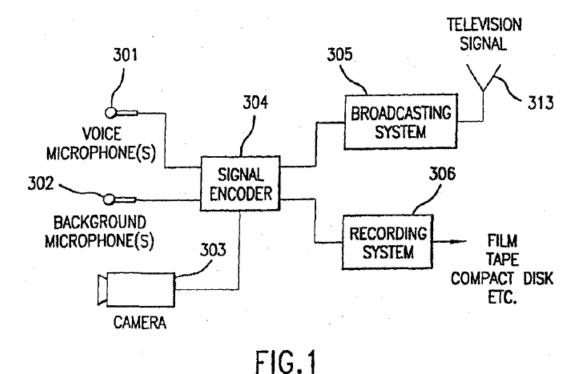


Figure 1 depicts an exemplary system for generating the encoded audio signals comprising at least a voice audio signal and remaining audio signals. *See id.* at 6:65–7:3. Signal encoder 304 receives an audio input

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signal from microphone 301 ("voice signal"), receives background audio signals from microphone(s) 302 ("remaining audio"), and receives a video signal from camera 303. *Id.* at 7:4–34. The encoded voice audio, background audio, and video signals are broadcast through broadcasting system 305 and antenna 313 and/or recorded by recording system 306 on a storage medium for later playback by a listener. *Id.* at 7:35–42.

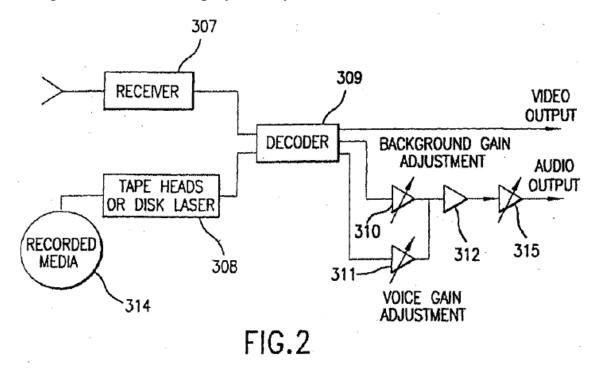


Figure 2, above, depicts a device for playback (PLD) of the encoded audio and video signals received from broadcast via receiver 307 and/or retrieved from storage media 314 by tape heads or disk laser 308. *Id.* at 7:43–49. The received/retrieved encoded signals are applied to decoder 309 to decode the video, voice audio, and background audio signals. *Id.* at 50–54. The decoded background audio signal is applied to variable gain amplifier 310 that selectively adjusts the gain (i.e., amplitude/volume) of the decoded background audio signal. *Id.* at 7:50–59. In like manner, the decoded voice audio signal is applied to variable gain amplifier 311 that

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