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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NAMBIRAJAN SESHADRI,
JEYHAN KARAOGUZ, and JAMES D. BENNETT

Appeal 2015-001976
Application 12/982,377
Technology Center 2400

Before JOHNNY A. KUMAR, NATHAN A. ENGELS, and
CARL L. SILVERMAN, *Administrative Patent Judges*.

ENGELS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–3, 5–11, 13–15, 17, 18, and 23–27. Claims 4, 12, 16, and 19–22 are canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

ILLUSTRATIVE CLAIM

Claim 1, reproduced below with emphasis added, is illustrative of the claimed subject matter:

1. A method supporting a viewer of a three-dimensional visual presentation within a premises, the viewer having a first orientation within the premises, the method comprising:
 - identifying at least one positional characteristic relating to the first orientation of the viewer within the premises;
 - delivering a video output, tailored based at least in part on the at least one positional characteristic, for the three-dimensional visual presentation to the viewer in the first orientation; and
 - delivering an audio output, tailored based at least in part on the at least one positional characteristic, to audibly supplement the video output for the viewer in the first orientation, *the tailoring of the audio output based at least in part on image data captured within the premises, the image data indicating the at least one positional characteristic.*

THE REJECTIONS

Claims 1–3, 5–11, 13–15, 17, 18, and 23–27 stand rejected under 35 U.S.C. § 103(a) as unpatentable in view of various combinations of Vogel (US 2007/0096125 A1; May 3, 2007), Yamada (US 5,959,597; Sept. 28, 1999), Kikinis (US 2009/0238378 A1; Sept. 24, 2009), Swift (US 2004/0036763 A1; Feb. 26, 2004), Kasahara (US 6,697,687 B1; Feb. 24, 2004), and Hiramatsu (US 2008/0192112 A1; Aug. 14, 2008).

Claim 24 stands rejected under 35 U.S.C. § 101 as claiming non-statutory subject matter.

ANALYSIS

Appellants contend the cited combination of references fails to teach or suggest the “the tailoring of the audio output based at least in part on image data captured within the premises, the image data indicating the at least one positional characteristic” as required by claim 1. Specifically, Appellants argue the Examiner erred in relying on Kikinis for the disputed limitation because (1) Kikinis determines the position of the sound sources solely by using audio data, not image data, and (2) the positions of sound sources in Kikinis are only determined during the recording of video content, not during the playback of video content. App. Br. 7–11.

We find Appellants’ arguments unpersuasive and agree with the Examiner that Kikinis teaches tailoring audio output based on image data captured within the premises as claimed. *See* Ans. 3–5. As the Examiner finds, Kikinis teaches that in an “immersive interactive virtual reality environment, the correct sound position changes following a participant’s movements in both direction and location for interactions.” Kikinis ¶ 10. Further, Kikinis teaches calibrating sound locations with an immersive video system (*see* Kikinis ¶¶ 16, 64) to produce “enhanced immersive audio and videos, with which participants can enjoy [a] true interactive, immersive audio-visual virtual reality experience” (Kikinis ¶ 64).

We are unpersuaded by Appellants’ arguments that Kikinis describes actors, as opposed to participants, wearing motion sensors during certain recording processes (*see, e.g.*, Kikinis ¶ 91), because, as Appellants acknowledge, Kikinis additionally teaches participants wearing such sensors “during playback” (App. Br. 10). We are also unpersuaded by Appellants’ argument that Kikinis describes motion sensors to monitor participants’ head

position and movement rather than using captured “image data.”

Appellants’ Specification describes the claimed captured images to include infrared images or other types of images outside of the human visible spectrum. Spec. ¶¶ 65 (stationary location support circuitry “may capture images of the viewing environment (perhaps even in infrared spectrum and with a lesser resolution camera) to support identification of viewer 1-6 and gathering the viewer’s associated location, eye/ear orientation or some other reference”); 106 (“images of a resolution or frequency range that is beyond the rods/cones capability of the human eye”).

Although this disclosure is not limiting of the claimed invention, it provides context for interpretation of the disputed limitations. The Examiner has identified the relevant portions of Kikinis and has provided sufficient explanation with corresponding citations to various parts of the reference for disclosing the disputed limitations. Ans. 3–5.

Accordingly, having considered the Examiner’s rejection of claim 1 in view of each of Appellants’ arguments and the evidence of record, we are unpersuaded of error and sustain the Examiner’s rejection of claim 1, as well as claims 2–3, 5–11, 13–15, 17, 18, and 23–27 for which Appellants do not advance independent arguments (*see* App. Br. 12–15). We agree with and adopt as our own the Examiner’s findings and conclusions consistent with the above.

Additionally, Appellants do not rebut or address the Examiner’s rejection of claim 24 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Final Act. 2–3. Accordingly, we affirm this rejection *pro forma*.

DECISION

We affirm the Examiner's rejections of claims 1–3, 5–11, 13–15, 17, 18, and 23–27 under 35 U.S.C. § 103(a). We affirm the Examiner's rejection of claim 24 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended. 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED