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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DIRK SCHAEFER and MICHAEL GRASS

Appeal 2016-003404
Application 12/445,752
Technology Center 2600

Before JOHNNY A. KUMAR, CATHERINE SHIANG, and
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

KUMAR, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Final Rejection of claims 1 and 3–20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

Exemplary Claim

Independent claim 1 illustrates the invention as follows:

1. A method for building a 4D reconstruction of a region of interest exhibiting multiple phases of periodic motion, the method comprising:

(i) building, with a processor, a plurality of 3D reconstructions using a plurality of subsets of 2-D projections which are identified from a set of 2-D projections, wherein each of the plurality of subsets of the 2-D projections corresponds to a different motion phase of the region of interest and each of the 3D reconstructions corresponds to a different one of the plurality of subsets; and

(ii) deriving, with the processor, one or more 3D model segments from each of said plurality of 3D reconstructions, wherein a plurality of 3D model segments are formed thereby, and wherein each of the one or more 3D model segments is derived from a single one of the plurality of 3D reconstructions, wherein, the plurality of derived 3D model segments forms a 4D reconstruction of the region of interest.

Rejections

Claims 1, 3, and 12–20 are rejected under 35 U.S.C. § 102(e) as being anticipated by Langan (US 2006/0133564 A1, June 22, 2006). Final Act. 2–7.

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Langan and Leach (US 2007/0127809 A1, June 7, 2007). Final Act. 7–9.

Claims 6–8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Langan and Pan (US 2007/0036418 A1, Feb. 15, 2007). Final Act. 10–12.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Langan, Pan, and Webler (US 2007/0167801 A1, July 19, 2007). Final Act. 12–13.

Claims 10 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Langan and Webler. Final Act. 13–15.

ANALYSIS

Independent claim 1 recites, *inter alia* (emphasis added), “deriving, . . . one or more 3D model segments from each of said plurality of 3D reconstructions, wherein a plurality of 3D model segments are formed thereby, and wherein *each* of the one or more 3D model segments is derived from a *single* one of the plurality of 3D reconstructions.”¹

Appellants argue Langan does not disclose this limitation. App. Br. 4–5; Reply Br. 2–4.

In particular, Appellants argue, and we agree, in Langan, Paragraph [0053] states the desired motion-corrected reconstructions (plural) are associated spatially, e.g., spatially proximate or adjacent images may be ordered or combined to generate a static volume rendering at one instant in the cardiac cycle. Hence, when considering claim 1 as a whole, Langan et al., step 84 of Figure 2 and paragraph [0053], does not read on claim 1. . . . Langan et al. explicitly requires generating the static volume rendering by spatially associating *more than a single 3D reconstruction* (i.e., the reconstructions 84).

Reply Br. 2.

We agree with Appellants as our interpretation of the disclosure of Langan coincides with that of Appellants. *See* App. Br. 4–5; Reply Br. 2–4.

¹ Claims 12 and 14 recite similar subject matter.

Appeal 2016-003404
Application 12/445,752

We conclude that the Examiner's findings are not supported by Langan for the reasons set forth by Appellants.

Therefore, on this record, we find the weight of the evidence supports the positions articulated by Appellants in the briefs. Accordingly, as such, we cannot sustain the Examiner's rejections of claims 1, 12, and 14.

Because we reverse the rejection of independent claims 1, 12, and 14 on appeal, we also reverse the rejections of dependent claims 3–11, 13, and 15–20, which depends on claims 1, 12, and 14 respectively.

DECISION

The Examiner's decision to reject claims 1 and 3–20 is reversed.

REVERSED