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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL GRASS and ANDY ZIEGLER

Appeal 2014-007520[1]
Application 12/741,397[2]
Technology Center 3600

Before ANTON W. FETTING, CYNTHIA L. MURPHY, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

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

We REVERSE.

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1. Our decision references Appellants' Appeal Brief ("Appeal Br.," filed December 23, 2013) and Reply Brief ("Reply Br.," filed June 25, 2014), the Examiner's Answer ("Ans.," mailed April 28, 2014), and Final Office Action ("Final Act.," mailed August 16, 2013).
2. Appellants identify Koninklijke Philips Electronics N.V., as the real party in interest (Appeal Br. 3).

CLAIMED INVENTION

Appellants' claimed invention "relates to an apparatus, a method and a computer program for determining a parameter of a moving object" (Spec. 1, ll. 2–3).

Claims 1, 9, and 10 are the independent claims on appeal. Claim 1, reproduced below, with minor formatting changes and added bracketed notations, is illustrative of the subject matter on appeal:

> 1. An apparatus for determining a parameter of a moving object, the apparatus comprising:
>
> [a] an adaptive model providing unit for providing an adaptive model of the object,
>
> [b] a user interface that allows a user to select a preshaped region from a subset of predefined preshaped regions of the adaptive model,
>
> [c] an image data set providing unit that provides a spatially and temporally dependent image data set of the moving object,
>
> [d] an adaptation unit that adapts at least the preshaped region of the adaptive model to the spatially and temporally dependent image data set that determines a spatially and temporally dependence of the preshaped region, and
>
> [e] a parameter determining unit that determines the parameter of the moving object depending on the spatially and temporally dependence of the preshaped region.

REJECTION

Claims 1–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Declerck (US 6,289,135 B1, iss. Sep. 11, 2001) and Kaus (US 2006/0165268 A1, pub. July 27, 2006).

ANALYSIS

Independent claims 1 and dependent claims 2–8, 11, and 12

We are persuaded by Appellants' argument that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 103(a) because a combination of Declerck and Kaus does not disclose or suggest "a user interface that allows a user to select a preshaped region from a subset of predefined preshaped regions of the adaptive model," as recited by limitation [b] of independent claim 1 (*see* Appeal Br. 5–6; *see also* Reply Br. 2–3).

The Examiner maintains that the rejection is proper, and cites paragraphs 11 and 28 of Kaus, as disclosing the argued limitation (*see* Final Act. 3; *see also* Ans. 4). In particular, the Examiner finds

> Declerck in view of Kaus discloses: . . . surface elements belonging to subparts of the object are selected and labeled; . . . allows a simple and efficient reconnaissance of subparts of the object and an identification of surface elements belonging to these subparts requiring a minimized number of calculations when the model is applied to a new object in an image. [p. 1, ¶0011 of Kaus]. Declerck in view of Kaus also discloses: . . . a suitable geometric primitive is selected in accordance with the measurement to be carried out . . . ; [t]his can be done by physician or suitable pattern recognition method. [p. 2–3, ¶0028 of Kaus].

(Ans. 11). Based on the cited portions of Kaus, the Examiner concludes "that Declerck in view of Kaus seemingly suggests 'a user interface that allows a user to select a preshaped region from a subset of predefined regions of the adaptive model', as recited by the Appellants in independent Claim 1" (*id.*).

The difficulty with the Examiner's analysis, however, is that Kaus does not disclose or suggest "select[ing] a preshaped region from a subset of predefined preshaped regions of the adaptive model," as recited by limitation

[b] of independent claim 1. We agree with Appellants that in Kaus, "[t]he geometric primitives are used as building blocks to form regions of the object model and are not predefined preshaped regions of the adaptive model" (Appeal Br. 6), but rather "'fit into' the surface model" (Reply Br. 3 (citing Kaus ¶ 29)). In this regard, we note that that Kaus describes that its system generates a surface model of an object wherein the surface is represented by a polygonal mesh (*id.* ¶ 25), but that "[a]fter generating the surface representation, i.e. the deformable surface model, additional geometric properties are integrated into the deformable surface model" (*id.* ¶ 26). More particularly, Kaus discloses

> [s]tep **52** comprises a step **53** wherein surface elements belonging to sub-parts of the object are identified. If the example of a femur is used, sub-parts of the femur are for example a femur head, a femur shaft etc. The sub-parts, i.e. the subdivision of the object into sub-parts, depends on which measurements are of interest. If, for example, a center of the femur head is of interest, preferably the femur is sub-divided into a femur head and a femur shaft. Then, in a following step **54**, surface elements of the surface model, i.e. the triangles of the mesh, are labelled in accordance with the respective sub-part of the object to which they belong. As label, for example, integer numbers can be attached to the respective triangles. The triangles are labelled such that all triangles belonging to the same sub-part have the same label. This can for example be carried out by a physician with an interactive display and a pointing and selection device or with a corresponding selection method. However, it is also possible to use a pattern recognition algorithm for identifying and labelling sub-parts of the object for the geometric property to be measured.

(*Id.* ¶ 27). Kaus further discloses "a suitable geometric primitive is [then] selected in accordance with the measurement to be carried out and a form of the respective sub-part . . . [which] can be done by a physician or a suitable

pattern recognition method" (*id.* ¶ 28). Following "the geometric primitive is fit into the surface model, i.e. the geometric primitive is fit to the surface elements of the respective sub-part of the object" (*id.* ¶ 29). Kaus discloses that "a rule is determined for mapping the geometric primitives onto the sub-parts" (*id.* ¶ 30) and then "ends with a finished extended deformable surface model" (*id.* ¶ 31).

Therefore, as Appellants point out, "the adaptive model of Kaus et al. is a single structure and does not include a subset of predefined preshaped regions" which would "allow[] a user to select a preshaped region from a subset of predefined preshaped regions of the adaptive model," as required by limitation [b] of independent claim 1. The Examiner does not rely on Declerck to address this deficiency.

In view of the foregoing, we do not sustain the Examiner's rejection of independent claim 1. For the same reasons, we also do not sustain the Examiner's rejection of dependent claims 2–8, 11, and 12.

Independent claims 9 and 10, and dependent claims 13–20

Independent claims 9 and 10 include language substantially similar to the language of independent claim 1 and stand rejected based on the same rationale applied in rejecting independent claim 1 (*see* Final Act. 5–6; *see also* Ans. 6–7). Therefore, we do not sustain the Examiner's rejection under 35 U.S.C. § 103(a) of independent claims 9 and 10, and dependent claims 13–20, for the same reasons set forth above with respect to independent claim 1.

DECISION

The Examiner's rejection of claims 1–20 under 35 U.S.C. § 103(a) is sustained.

REVERSED