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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOACHIM KAHLERT,
MICHAEL PERKUHN, and JOSEF LAUTER

Appeal 2019-006005
Application 12/515,842
Technology Center 3700

BEFORE DONALD E. ADAMS, JEFFREY N. FREDMAN, and
JOHN G. NEW, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from Examiner’s decision to reject claims 1, 3–7, 9, 11, 12, 14, 15, and 17–40 (Appeal Br. 11; Reply Br.³ 2). We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ This Appeal is related to Appeal 2016–004857 (Application 12/515,842), Decision affirming the obviousness rejection of then pending claims entered June 7, 2017.

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as “Koninklijke Philips N.V.” (Appellant’s April 23, 2019 Appeal Brief (Appeal Br.) 2).

³ Appellant’s August 8, 2019 Reply Brief.

STATEMENT OF THE CASE

Appellant's disclosure "relates to an apparatus, a method and a computer program for applying energy to an object" (Spec.⁴ 1). Claim 1 is reproduced below:

1. An apparatus for applying energy to an object, wherein the apparatus comprises:

an arrangement including energy emitting elements configured to output energy to the object and sensing elements, wherein at least some of the energy emitting elements are configured to emit energy to the object independently from each other, wherein the arrangement comprises an abutting surface during application of the energy to the object, wherein the energy emitting elements and the sensing elements are located on the abutting surface at different locations and wherein the abutting surface is abutable against an object surface of the object;

a path determination unit configured to automatically determine a path from measured properties of the object sensed by the sensing elements;

a model generation unit configured to generate an object model representing the object for display of the object model including display of the path on the object model for applying the energy to the object along the path; and

a control unit configured to select a portion of the energy emitting elements in response to the selected portion of the energy emitting elements being on the path and to automatically activate the selected portion of the energy emitting elements and apply the energy to the object from the selected portion of the energy emitting elements that are on the path.

(Appeal Br. 23–24.)

⁴ Appellant's May 21, 2009 Specification.

Claims 1, 3–7, 9, 11, 12, 14, 15, and 17–40⁵ stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Gelbart⁶ and Rahn.⁷

ISSUE

Does the preponderance of evidence relied upon by Examiner support a conclusion of obviousness?

ANALYSIS

Examiner finds that Gelbart discloses Appellant’s claimed invention, but for “a model generation unit configured to generate an object model,” and relies on Rahn to make up for this deficiency in Gelbart (Ans. 9; *see also* Final Act. 10). Thus, based on the combination of Gelbart and Rahn, Examiner concludes that, at the time Appellant’s invention was made, it would have been *prima facie* obvious “to have modified Gelbart with a model generating unit of Rahn with its associated imaging components, for the added advantage of three dimensional representation of the planned ablation for visualization by the surgeon” (Ans. 9; *see also* Final Act. 10).

In reaching the foregoing conclusion of obviousness, Examiner finds, *inter alia*, that Gelbart discloses the generation and display of a map “having selected elements 10 (bolded) that highlight a path,” thus, Examiner reasons that Gelbart discloses Appellant’s path determination unit (*see* Ans. 7–8 (citing Gelbart’s Figure 7)). We are not persuaded.

⁵ Examiner included canceled claim 16 in the statement of the rejection (*see* Examiner’s November 28, 2018 Final Office Action (Final Act.) 8; Examiner’s June 10, 2019 Answer (Ans.) 7; *cf.* Reply Br. 2). We did not include canceled claim 16 in our deliberations.

⁶ Gelbart et al., US 2008/0004534 A1, published Jan. 3, 2008.

⁷ Rahn, US 2007/0049924 A1, published Mar. 1, 2007.

Gelbart “relates to percutaneous mapping and ablation” (Gelbart ¶ 2). Gelbart discloses that “[b]efore any ablation takes place, the inside of the left atrium . . . is mapped in order to locate the openings . . . leading to the pulmonary veins . . . , as well as the mitral valve” (*id.* ¶ 30). Gelbart’s

mapping is based on locating . . . some or all [of] the openings or parts . . . through which blood flows in and out of the left atrium By the way of example, in the left atrium . . . , the four openings or ports . . . leading to the pulmonary veins . . . as well as the mitral valve . . . may be located. The location . . . may be based on the fact that the convective cooling effect of the blood is significant, and a slightly heated mesh . . . pressed against the walls of the left and/or right atrium . . . will be cooler at the areas which are spanning the openings or ports . . . carrying bloodflow.

. . . [T]he ablation mesh [is] covered by miniature heating and/or temperature sensing elements **10a-10c** . . . (collectively **10** . . .). Each one of these elements **10a-10c** comprises of a few turns of a resistive wire, for example nickel wire, wound on an electrically insulated mesh. A low current is passed through each element **10**, raising a temperature of the element **10** by about 1 degree C. above normal blood temperature. A first element **10b**, which is lies across an opening or port . . . of one of the pulmonary veins . . . , will be cooled by blood flow. The other elements are against a wall . . . and hence do not lie across any of the openings or ports

By identifying the relatively cooler elements **10a**, **10c** on the mesh . . . , the location of the openings or ports . . . may be found.

(Gelbart ¶¶ 31–33 (emphasis omitted); *see also id.* ¶ 39.) “After a map is established, it is displayed on a display screen” and “[t]he surgeon can select which elements **10** will cause tissue [ablation] in the atrium” (*id.* ¶ 43).

As Appellant explains, however, “a map is not a path; rather a map includes many paths” and “[i]n Gelbart, once a map is displayed, . . . it is the

surgeon who selects a path out of many paths . . . in a map” (Reply Br. 4; *see id.* at 5 (citing Gelbart ¶ 43) (“it is the surgeon who selects which elements 10 will cause tissue ablation in the atrium”); *id.* at 6 (Appellant contends that although “the Gelbart system determines and displays a map, a path determination unit which is configured to automatically determine a path is nowhere disclosed or suggested in Gelbart”); Appeal Br. 15 (Appellant contends that “any path in Gelbart is determined by the surgeon, since it is the surgeon who selects which elements 10 will cause tissue ablation in the atrium”).

For the foregoing reasons, we agree with Appellant’s contention that “Gelbart specifically recites that it is the surgeon who selects which element to activate, instead of any controller that selects and automatically activates a portion of the energy emitting elements in response to the selected portion of the energy emitting elements being on the path” (Appeal Br. 16). In this regard, we agree with Appellant’s contention that Gelbart’s control computer 23 “does not perform any selection,” but instead “merely connects a generator 21 to the selected elements 10, which are selected by the surgeon” (Appeal Br. 16 (citing Gelbart ¶¶ 40 and 43)). Therefore, we are not persuaded by Examiner’s assertion that Gelbart makes obvious a control unit within the scope of Appellant’s claimed invention (*see* Ans. 8 and 17).

We are not persuaded by Examiner’s assertion that “[a]lthough Gelbart . . . [discloses] that the surgeon **can** (i.e., is able to or permitted to) select which elements 10 will cause ablation, the surgeon action would merely make changes (if necessary) to the path in the map . . . determined by a module of [Gelbart’s] control computer 23” (Ans. 17 (citing Gelbart

¶ 43); *see also* Ans. 18). As Appellant explains, even if a “surgeon merely changes that which the Gelbart computer 23 has already selected, there is . . . no disclosure or suggestion in Gelbart that the computer 23 selects the elements 10 based [on] measured properties of the object sensed by any sensing elements” (Appeal Br. 17). In this regard, Appellant explains that although Gelbart describes voltage and temperature measurement, . . . such measurement are not to select any elements 10,” instead Gelbart’s “temperature measurements are used to form a map of the heart showing openings or ports 8 leading to the veins or valves based on the convection cooling effect of the blood flow” (Appeal Br. 17 (citing Gelbart ¶ 39)). “Once the map is established,” in Gelbart, “it is the surgeon who selects which elements 10 to activate, as specifically recited in paragraph [0043] of Gelbart” (Appeal Br. 18; *see id.* (Appellant contends that “[e]ven if . . . [Gelbart’s] computer 23 selects the elements 10,” Gelbart’s “computer 23 does not ‘automatically activate the selected portion of the energy emitting elements,’ as recited in independent claim 1, and similarly recited in independent claims 12 and 14. Rather, it the surgeon who selects and activates desired elements.”)).

Thus, for the foregoing reasons, we agree with Appellant’s contention that Gelbart discloses neither (a) a path determination unit nor (b) control unit configured according to Appellant’s claimed invention (*see* Appeal Br. 15).

Examiner relies on Rahm to disclose “a model generation unit configured to generate an object model,” (Ans. 9; Final Act. 10). Thus, we agree with Appellant’s contention that Examiner failed to establish that

Rahn remedies the foregoing deficiencies in Gelbart (*see* Appeal Br. 18; Reply Br. 7).

CONCLUSION

The preponderance of evidence relied upon by Examiner fails to support a conclusion of obviousness. The rejection of claims 1, 3–7, 9, 11, 12, 14, 15, and 17–40 under 35 U.S.C. § 103(a) as unpatentable over the combination of Gelbart and Rahn is reversed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3–7, 9, 11, 12, 14, 15, 17–40	103	Gelbart, Rahn		1, 3–7, 9, 11, 12, 14, 15, 17–40

REVERSED