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Datasheet for the decision of 3 February 2022

Case Number: T 1659/17 - 3.2.02

Application Number: 13172848.7

Publication Number: 2641557

IPC: A61B18/14

Language of the proceedings: EN

Title of invention:
Apparatus and method for intra-cardiac mapping and ablation

Applicant:
Kardium Inc.

Headword:

Relevant legal provisions:
EPC Art. 76(1)

Keyword:
Divisional application - added subject-matter (no) - after amendment

Decisions cited:

Catchword:

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Case Number: T 1659/17 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 3 February 2022

Appellant: (Applicant)	Kardium Inc. 155-8518 Glenlyon Parkway Burnaby, BC V5J 0B6 (CA)
Representative:	Murgitroyd & Company Murgitroyd House 165-169 Scotland Street Glasgow G5 8PL (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 22 February 2017 refusing European patent application No. 13172848.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	S. Böttcher
	W. Sekretaruk

Summary of Facts and Submissions

I. The applicant filed an appeal against the Examining Division's decision to refuse European patent application No. 13172848.7. The Examining Division held that claim 1 of the main request and of the auxiliary request then on file did not meet the requirements of Article 76(1) EPC.

II. By letter of 16 December 2021, the appellant requested that a patent be granted on the basis of an amended main request.

III. Claim 1 of the main request reads as follows:

"A medical system comprising:
a display console (32); and
a control computer (23) connected to the display console, the control computer configured to:
control each of a plurality of elements to measure temperature within an atrium of a heart and determine locations of one or more openings in the atrium inferred from the temperatures measured by the plurality of elements;
establish a map of a plurality of ablation elements (10) and the location of the openings and cause the display console (32) to display the map on the display console (32);
receive user-input indicating which elements of the plurality of ablation elements (10) will cause tissue ablation in the atrium to define a user-selected ablation pattern; and cause, prior to beginning ablation of the user-selected ablation pattern in tissue, the display console (32) to display a representation of the user-selected ablation pattern at

least in response to the user-input."

IV. The appellant's arguments, in so far as relevant to the present decision, can be summarised as follows.

Figure 7 showed a map depicting the mesh 7 together with the pulmonary veins 5 and the mitral valve, the location of which had been established by means of the temperature measurement. The dashed line around the locations of the openings represented a pattern resulting from the user's selection of elements. There was no indication in the application as a whole that only some of the elements 10 would be displayed as being user-selectable or that these elements were displayed as the dashed line in Figure 7.

Hence, there was a basis for the features "cause the display console (32) to display the map" and "receive user-input indicating which elements of the plurality of ablation elements (10) will cause tissue ablation in the atrium to define a user-selected ablation pattern; and cause, prior to beginning ablation of the user-selected ablation pattern in tissue, the display console (32) to display a representation of the user-selected ablation pattern at least in response to the user-input", namely in Figure 7 and in the description of the application as originally filed, page 10, line 29 to page 11, line 2.

Therefore, claim 1 fulfilled the requirements of Article 76(1) EPC.

Reasons for the Decision

1. Subject-matter of the application

The application relates to intra-cardiac mapping and ablation for treating atrial fibrillation by the Maze procedure. Atrial fibrillation means that spurious electrical signals cause an irregular heartbeat. In the Maze procedure, a border ("fence") is ablated around the sources of the spurious signals, typically in the left atrium, to create a pattern (the maze) of scar tissue. While the procedure is commonly performed under direct vision, the application in hand relates to a percutaneous procedure. This requires the heart wall to be mapped in order to accurately locate the openings leading to the pulmonary veins and the mitral valve. A typical Maze procedure then ablates a fence around these openings to stop the spurious electrical signals propagating.

In the application in hand, an ablation mesh 7 is introduced into the left atrium and made to lie against the atrium wall (Figure 1). The mesh is covered by miniature temperature sensors 10 (Figure 4). The location of the openings leading to the pulmonary veins and the mitral valve in the heart wall may be found on the basis of a temperature measurement, since the areas of the openings are cooler due to the convective cooling effect of the blood flow. Hence, in a mapping mode, the temperature elements are turned on sequentially and the temperature is measured. A map is then formed in the control computer and displayed on a screen, and the lower-temperature spots correspond to the openings 5 leading to the veins or valves (Figure 7). The elements 10 can then be used as ablation electrodes in an ablation mode.

According to claim 1, the control computer is configured to:
- control each of a plurality of elements to measure the temperature within an atrium of a heart and determine the locations of one or more openings in the atrium
- establish a map of a plurality of ablation elements (10) and the location of the openings and cause the display console (32) to display the map
- receive user-input indicating which elements (10) will cause tissue ablation to define a user-selected ablation pattern and
- cause the display console to display the user-selected pattern.

2. Main request - Article 76(1) EPC

2.1 The Examining Division held that the feature "the control computer is configured to cause ... the display console to display a representation of the user-selected ablation pattern at least in response to the user-input" in claim 1 was not disclosed in the earlier application (No. 07809934.8) in respect of which the divisional application in hand was filed.

2.2 The Board agrees with the appellant that, contrary to the Examining Division's opinion, Figure 7 shows a pattern of user-selected elements in the form of the dashed line around the circles indicating the pulmonary veins 5. As mentioned on page 10, line 29 to page 11, line 2, the surgeon can select which elements 10 will cause tissue ablation in the atrium and the pattern formed is along the lines of the standard Maze procedure. As explained on page 6, lines 11 to 13, this means that the pattern forms a "fence" around the

openings leading to the veins, which is what is disclosed in Figure 7.

Hence, there is no doubt that the dashed line represents the user-selected ablation pattern and not all the user-selectable elements, as alleged by the Examining Division. The Board agrees with the appellant that the description does not contain any suggestion at all that only some elements 10 would be displayed as being user-selectable.

2.3 The Board has no other objections under Article 76(1) EPC against claim 1 of the main request. Therefore, claim 1 of the main request satisfies the requirements of Article 76(1) EPC.

3. Since no decision has been taken on the claims of the main request with regard to the other requirements of the EPC, the Board considers that there are special reasons under Article 11 RPBA 2020 and remits the case to the Examining Division for further prosecution pursuant to Article 111(1) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Examining Division for further prosecution.

The Registrar: The Chairman:

D. Hampe M. Alvazzi Delfrate

Decision electronically authenticated