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Datasheet for the decision of 25 May 2007

Case Number: T 1024/06 - 3.4.01

Application Number: 99309164.4

Publication Number: 1003051

IPC: G01S 15/89

Language of the proceedings: EN

Title of invention:
Ultrasonic imaging apparatus

Applicant:
GE YOKOGAWA MEDICAL SYSTEMS, LTD.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 83, 84, 123(2)

Keyword:
-

Decisions cited:
-

Catchword:
-

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Case Number: T 1024/06 - 3.4.01

D E C I S I O N
of the Technical Board of Appeal 3.4.01
of 25 May 2007

Appellant: GE YOKOGAWA MEDICAL SYSTEMS, LTD.
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Hino-shi,
Tokyo 191 (JP)

Representative: Goode, Ian Roy
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General Electric International, Inc.
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London WC2N 6LU (GB)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 13 February 2006 refusing European application No. 99309164.4 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: B. Schachenmann
Members: R. Bekkering
G. Assi

Summary of Facts and Submissions

I. European patent application no. 99309164.4 (publication no. EP-A-1 003 051) was refused pursuant to Article 97(1) EPC by a decision of the examining division dispatched on 13 February 2006. The decision was based on the state of the file, as requested.

II. The applicant (appellant) lodged an appeal against the decision on 19 April 2006 and paid the appeal fee on the same day. The statement setting out the grounds of appeal was received on 23 June 2006.

III. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the following documents:

Claims:	no. 1 to 17 filed with the grounds of appeal on 23 June 2006;
Description:	pages 1 to 29 as originally filed;
Drawings:	Sheets 1/12 to 12/12 as originally filed.

IV. Oral proceedings, requested as an auxiliary measure by the appellant, were scheduled to be held on 14 June 2007. By fax and letter dated 20 April 2007, the appellant noted that he would be unable to attend the oral proceedings and requested that a written decision be made in accordance with the current state of the file.

V. In the annex to the summons to the oral proceedings pursuant to Article 11(1) RPBA, the board made observations concerning *inter alia* lack of clarity

(Article 84 EPC), inadmissibility of amendments (Article 123(2) EPC) and insufficient disclosure (Article 83 EPC).

VI. Claim 1 reads as follows:

"*1. An ultrasonic imaging apparatus comprising ultrasound transmit/receive means (2) adapted to repeatedly scan an imaging range with an ultrasound and receive an echo and velocity detecting means to detect a moving velocity (V) of an echo source based on a Doppler shift in a received echo, the apparatus characterized by:*

pulsation detecting means (132) adapted to detect a pulsation strength (P) in the moving velocity (V) by a calculation that employs a value (V_n) of the moving velocity (V) at a current time phase and a value (V_0) of the moving velocity (V) at a past time phase;

variance detecting means (128) for detecting a variance (T) of the moving velocity (V);

wherein the pulsation detecting means (132) performs the calculation employing the variance (T) detected by the variance detecting means (128) by reducing the value of the pulsation strength (P) when the variance (T) is small, so as to suppress the detection sensitivity of the apparatus to venous blood flow; and

display means (16) adapted to produce a combined image comprising an image representing the received echo and an image representing the detected pulsation strength (P)."

Independent claim 17 is directed to a corresponding ultrasonic method.

Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. In the annex to the summons to the oral proceedings pursuant to Article 11(1) RPBA, the board observed in particular that claim 1 as amended appeared not to meet the requirements of Articles 84 and 123(2) EPC.

In particular, claim 1 as amended contains the feature "*wherein the pulsation detecting means (132) performs the calculation employing the variance (T) detected by the variance detecting means (128) by reducing the value of the pulsation strength (P) when the variance (T) is small, so as to suppress the detection sensitivity of the apparatus to venous blood flow*".

As in substance indicated in the above annex, the only reference in the application documents as originally filed to a reduction of the value of pulsation strength P if the variance T is small, is on page 21, lines 9 to 17. This reference, however, is provided in the specific context of a detection of the pulsation strength of blood flow according to either equation (1) or (2) provided on page 20 and not in the more general context of claim 1. Moreover, the result to be achieved by this reduction is "*suppressing the excessive pulsation strength detection*" (see page 21, lines 16 to 17). Although it is not fully clear what is meant hereby, and thus what it takes to meet this requirement,

this requirement does not correspond to the requirement defined in claim 1 "*so as to suppress the detection sensitivity of the apparatus to venous blood flow*".

Regarding a basis in the application for the above feature, the appellant has referred to the preceding passage in the description (ie page 21, lines 4 to 7). This passage, however, concerns the decrease of the factor m in equation (2) for velocities below a threshold value and does not relate to the consideration of the variance (see page 20, lines 20 to page 21, line 8).

Furthermore, it remains unclear from the claim, and indeed the application as a whole, how "*a variance of the moving velocity*" is defined and which data points would be used.

The same applies to independent claim 17.

For the reasons above, independent claims 1 and 17 as amended lack clarity and contain subject-matter extending beyond the content of the application as filed, contrary to the requirements of Articles 84 and 123(2) EPC.

3. As a matter of fact, as noted in the aforementioned annex, the reduction of the detection of the pulsation strength P based on variance is not disclosed in the application as a whole in a manner sufficiently clear and complete for it to be carried out by a skilled person, so that the requirements of Article 83 EPC are not met.

4. No submissions were made by the appellant in response to the board's observations provided in the annex to the summons to oral proceedings referred to above.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

R. Schumacher B. Schachenmann