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**Datasheet for the decision  
of 24 May 2011**

**Case Number:** T 1403/07 - 3.5.04

**Application Number:** 02258506.1

**Publication Number:** 1324272

**IPC:** G06T 15/00

**Language of the proceedings:** EN

**Title of invention:**

Methods and apparatus to assist and facilitate vessel analysis

**Applicant:**

GE Medical Systems Global Technology Company LLC

**Headword:**

-

**Relevant legal provisions:**

RPBA Art. 12(2), 13(1), 15(1)(3)(5)(6)

**Relevant legal provisions (EPC 1973):**

EPC Art. 116(1)

EPC Art. 113(1)

EPC R. 71(2)

**Keyword:**

"Oral proceedings held in absence of appellant"

"Admission of amended claims (no) - did not address all the board's objections"

**Decisions cited:**

T 0602/03, T 1704/06, T 0991/07, T 1867/07

**Catchword:**

see points 5 and 12 of the Reasons



Case Number: T 1403/07 - 3.5.04

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.04  
of 24 May 2011

**Appellant:** GE Medical Systems Global Technology Company LLC  
3000 North Grandview Boulevard  
Waukesha  
Wisconsin 53188-1696 (US)

**Representative:** Bedford, Grant Richard  
Global Patent Operation - Europe  
GE International Inc.  
15 John Adam Street  
London WC2N 6LU (GB)

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 13 March 2007  
refusing European patent application  
No. 02258506.1 pursuant to Article 97(1) EPC  
1973.

**Composition of the Board:**

**Chairman:** F. Edlinger  
**Members:** M. Paci  
T. Karamanli

## Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division refusing European patent application No. 02 258 506.1 published as EP 1 324 272 A2.
- II. In a communication dated 30 October 2006 and annexed to the summons to oral proceedings, the examining division had argued *inter alia* that the subject-matter of claims 1 and 7 lacked novelty in view of each of the following prior-art documents:
- D1: US 5 782 762 A, and  
D2: WO 00/41134 A1.
- III. With a letter dated 8 February 2007, the applicant filed a set of amended claims, replacing all previous claims.
- IV. According to the minutes (dated 14 February 2007 and despatched to the applicant on 21 February 2007) of a telephone consultation between the applicant and the first examiner of the examining division, the following objections were raised by the examiner:
- the amendments filed with the letter dated 8 February 2007 introduced subject-matter extending beyond the content of the application as filed, in violation of Article 123(2) EPC 1973; and
  - the independent claims did not meet the requirements of Article 84 EPC 1973 for lack of clarity.
- V. In a letter dated 7 March 2007, the applicant requested a decision according to the state of the file on the

basis of the claims submitted with the letter of 8 February 2007.

- VI. In the decision according to the state of the file (EPO FORM 2061), the examining division referred to the communication dated 30 October 2006 and the notification of the minutes of the telephone consultation dated 21 February 2007, and refused the application.
- VII. The applicant filed an appeal against this decision. With the statement of grounds of appeal, the appellant filed a set of amended claims 1 to 4, replacing all previous claims.
- VIII. In a communication under Article 15(1) RPBA (Rules of Procedure of the Boards of Appeal, OJ EPO 2007, 536), annexed to the summons to oral proceedings, the board expressed the preliminary opinion that the main issues to be dealt with in the oral proceedings were the allowability of the amendments (Article 123(2) EPC) and the clarity of the claims (Article 84 EPC 1973). The board set out objections in detail and expressed the view that, provided that all deficiencies in these respects were overcome, the further issue of lack of novelty may become obsolete in view of the substantial amendments made on appeal. The board added that it would be inclined to remit the case to the examining division on the basis of allowably amended claims if these were clear and defined subject-matter not *prima facie* anticipated by D1 or D2. Moreover, reference was made to Article 13 RPBA.

IX. With a letter dated 12 May 2011, the appellant filed an amended set of claims 1 to 4, replacing all previous claims. The appellant also stated: "It is noted that the Applicant hereby withdraws their previous request for Oral Proceedings and requests instead that the Appeal Board remit the claims supplied herewith to the Examining Division for further prosecution."

X. Oral proceedings were held on 24 May 2011 in the absence of the duly summoned appellant. At the end of the oral proceedings the board announced its decision.

XI. The appellant's final requests in its letter dated 12 May 2011 are reproduced here *verbatim*:

"[I]t is requested that the following amended set of claims supplied herewith be used to replace the claims currently on file, and that the application based upon this sole set of claims then be remitted to the Examining Division for further prosecution to consider allowability under Articles 54 and 56 EPC. This request is made to replace any previous requests made by the Applicant.

The Applicant further requests that the Appeal Board consider the allowability of the amended claims supplied herewith, particularly with regard to Articles 84 and 123(2) EPC. The Applicant requests that the Appeal Board exercise their discretion in accepting these late filed amendments which are made late due to the departure from GE of the previous US business attorney having overall responsibility for prosecuting this case.

...

In summary, it is thus requested that the claims supplied herewith be considered as the sole basis for the Appeal and remitted to the Examining Division for further consideration in respect of any Article 54 or Article 56 EPC issues that may arise."

XII. Independent claim 1 reads as follows:

"A method (60) for analyzing a tubular structure, said method comprising:

receiving (62) a cursor first position within a displayed tubular structure representative of the tubular structure; and

receiving a direction along the tubular structure; determining (64) a best path inside the tubular structure based only on the received cursor first position and the received direction; characterized by:

moving (66) a cursor along the path by a predetermined distance in a predetermined direction to a second cursor position; and

displaying at least one of a three-dimensional view depicting the cursor second position, an axial, a sagittal, a coronal and at least one oblique slice depicting the second cursor position, wherein the oblique slice is perpendicular to the tubular structure at the cursor second position;

displaying an internal three-dimensional view from the cursor second position;

and wherein

determining (64) the best path comprises the steps of:

setting a sphere of interest (82);

computing a distance from the centre to the sphere of interest (82) to the current cursor position (84);

computing a distance from the centre of the sphere of interest (82) to the tubular structure (86);

getting a furthest centered point (88) such that the furthest centered point is the point in a candidate set having the maximum distance to the border of the tubular structure, said candidate set being such that points (P) therein are defined such that the distance from respective points to the current cursor position (ctxCurPoint) is greater than a distance (Dfar) defined as  $Dfar = (4 * Dmax + 1 * Dmin) / 5$ , Dmin being a minimum distance from the centre of the sphere of interest to the current cursor position and Dmax a maximum distance from the sphere of interest to the current cursor position; and

computing (90) a best path from the current cursor position to the furthest centered point (FinalPoint) by propagating (100) a distance forward and propagating (102) a distance backward along a construction path P by using distance propagation between lines and distance propagation inside a line, and calculating a value Cost(Pn+1) for each point n according to:

$Cost(Pn+1) = \text{Minimum} (Cost(Pn+1), Cost(Pn) + V(Pn+1))$  where n is a step along the construction path, Pn denotes a point at step n, V(Pn) is a distance to the border of the tube from the corresponding point, and paths are along the six faces of a given voxel, such that direction codes from best predecessor points define the best path."

XIII. The examining division's reasoning in the decision under appeal, by way of reference to the communications dated 21 February 2007 and 30 October 2006, regarding the independent claims on file when the decision was issued, can be summarised as follows:

The amendments filed with the letter dated 8 February 2007 introduce subject-matter extending beyond the content of the application as filed, contrary to Article 123(2) EPC 1973. In particular, amended claim 1 refers to the determination of "the best path" but omits to mention several steps presented in the description as essential for determining the best path. Hence the addition of a step of determining the best path not necessarily including those essential steps does not comply with the requirements of Article 123(2) EPC 1973.

Several expressions in claim 1 have no well-recognised meaning, thereby rendering the claimed method unclear, in violation of the requirements of Article 84 EPC 1973.

XIV. The appellant's arguments can be summarised as follows:

*Admissibility of the claims filed on 12 May 2011*

The appellant requests that the board exercise its discretion in accepting these late-filed amendments which are made late due to the departure from the appellant of the previous US business attorney having overall responsibility for prosecuting this case.

*Regarding the objections raised by the examining division*

The objections raised by the examining division have been overcome by the amended claims filed during the appeal proceedings. In particular, the appellant has added all the features which the examining division



regarded as essential for determining the best path, and has rewritten the expressions held to be unclear.

*Regarding the board's preliminary opinion in its communication dated 7 February 2011*

The claims have been amended to address the board's objections of lack of clarity and added subject-matter.

For example, in response to point no. 10 of the board's communication, the claims have been amended to recite that the cursor is moved along the path by a predetermined distance to a second cursor position.

Further to point no. 11 of the board's communication, computation of the distance has been clarified by reciting that the distance is defined as being from the centre of the sphere of interest.

Referring to point no. 12 of the board's communication, the step of getting a furthest centred point has been further defined to explicitly recite how such a step is performed.

Concerning point no. 13 of the board's communication, it has been clarified in claim 1 that forward and backward propagation is by way of using distance propagation between lines and distance propagation inside a line.

As would be understood by those skilled in the art, distance propagation is the process of updating values at a particular location from information at another location. Such a propagation technique from one voxel

to its neighbours using such lines would be readily understood by the person skilled in the art.

Hence the amended claims address all of the outstanding objections under Article 84 EPC 1973 and Article 123(2) EPC that were raised by the board in its communication.

### **Reasons for the Decision**

1. The appeal is admissible.
2. According to Article 116(1), first sentence, EPC 1973 oral proceedings before the board take place either if the board considers this to be expedient or at the request of any party to the appeal proceedings. Hence the holding of oral proceedings does not only serve the purpose of giving a party a fair chance to argue its case in accordance with Article 113(1) EPC 1973, but it also enhances procedural efficiency since it makes it possible for the board to reach its decision as quickly as possible. In the present case, notwithstanding the appellant's withdrawal of its request for oral proceedings, the board has therefore refrained from cancelling the scheduled oral proceedings.
3. The duly summoned appellant did not attend the oral proceedings. According to Rule 71(2) EPC 1973, the proceedings were however continued without the appellant.

According to Article 15(3) RPBA, the "Board shall not be obliged to delay any step in the proceedings, including its decision, by reason only of the absence

at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case". Moreover, according to Article 15(6) RPBA, the "Board shall ensure that each case is ready for decision at the conclusion of the oral proceedings, unless there are special reasons to the contrary".

4. It is established case law of the boards of appeal that an appellant who submits amended claims shortly before the oral proceedings and subsequently does not attend these proceedings must expect a decision based on objections which might arise against such claims in his absence (see e.g. T 602/03, Reasons, point 7). Therefore, an appellant who submits new claims after oral proceedings have been arranged but does not attend these proceedings must expect that the board might decide that the new claims are not allowable because of deficiencies, such as for example lack of clarity (see e.g. T 991/07 and T 1867/07, Reasons, point 3.5), or lack of inventive step (see e.g. T 1704/06, Reasons, point 7.6). It is the board's view that the appellant must also expect a decision not admitting these amended claims into the appeal proceedings pursuant to Article 13(1) RPBA in his absence. This is in particular the case if the appellant's attention was drawn to the provisions of Article 13 RPBA in the communication annexed to the summons to oral proceedings.
5. In the present case, the amendments filed were not admitted into the appeal proceedings for the reasons detailed below. The appellant had to expect that there would be a discussion of the admission of its newly filed set of claims during oral proceedings, in

particular because reference was made to Article 13 RPBA in the board's communication under Article 15(1) RPBA. Due to the appellant's absence from the oral proceedings, relevant issues regarding Article 13 RPBA could not be discussed with the appellant. However, a duly summoned appellant who by his own volition does not attend the oral proceedings cannot be in a more advantageous position than he would have been if he had attended. The voluntary absence of the appellant can therefore not be a reason for the board not to raise issues it would have raised if the appellant had been present.

6. Since the appellant did not appear at the oral proceedings the board could only rely on the appellant's written submissions. The voluntary absence of the appellant was not a reason for delaying a decision and the board was also in a position to decide at the conclusion of the oral proceedings, since the case was ready for decision (Article 15(5) and (6) RPBA).
7. According to Article 12(2) RPBA, the statement of grounds of appeal must contain a party's complete case. Any amendment to a party's case after it has filed its grounds of appeal may, according to Article 13(1) RPBA, be admitted and considered at the board's discretion. This discretion shall be exercised in view of *inter alia* the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.
8. The present set of amended claims was filed with the letter dated 12 May 2011, i.e. after the board's

communication under Article 15(1) RPBA and only 12 days before the date of the oral proceedings. Thus the amended claims are an amendment to the appellant's case within the meaning of Article 13(1) RPBA at a very late stage of the appeal proceedings. The appellant presented in writing a justification for the late filing of the amended claims (see point XIV *supra*) which the board took into account. However, the appellant's allegation that the US business attorney "having overall responsibility for prosecuting this case" had left the appellant could not justify the admission of the amended claims into the appeal proceedings. It was not only because of the filing of the amended claims at a late stage of appeal proceedings by the appellant's European patent attorney that the board reached the conclusion that they could not be admitted into the proceedings, as can be seen from the reasons set out below.

9. In its communication annexed to the summons to oral proceedings, the board had raised a number of objections. **One objection**, under point 10 of the communication, was that claim 1 did not specify a clear relationship between the cursor first position and the current cursor position. **Another objection**, under point 11 of the communication, was that the definition of "distance" comprised in the steps of determining the best path in claim 1 seemed unclear and that, according to the application as filed, the "distance to the current cursor position" seemed to refer to the distance from the centre of the sphere to the current cursor position and the "distance to the tubular structure" seemed to refer to the distance of a new point to the (border of the) tubular structure.

10. Regarding the first objection mentioned in point 9 *supra*, the appellant's submissions filed with its letter of 12 May 2011 provide no clarification as to the relationship between the cursor first position and the current cursor position (which is apparently a new point, seemingly one of the points P<sub>n</sub> of the construction path P also mentioned in claim 1; see e.g. page 11, paragraph 2, of the application as filed, which was referred to in the board's communication). The appellant merely states in its letter that "in response to point no. 10 of the aforementioned Communication, the claims have been amended to recite that the cursor is moved along the path by a predetermined distance to a second cursor position". In the board's view, this explanation and the additional step in claim 1 of "moving (66) a cursor along the path by a predetermined distance in a predetermined direction to a second cursor position" does not address the board's objection. Indeed, the expression "current cursor position" in claim 1 is used only in the context of the step of determining the best path from the current cursor position to the furthest centered point (FinalPoint), whereas the newly added step of moving the cursor from a cursor first position along the path to a second cursor position is not performed during the step of determining the best path, but apparently after. Hence this amendment to claim 1 and the explanations submitted with the appellant's letter do not address the board's objection.
11. As to the board's other objection mentioned under point 9 *supra*, the appellant stated that computation of the distance has been clarified by reciting that the

distance is defined as being from the centre of the sphere of interest. While this reply and the corresponding amendment to claim 1 might address the problem the board had with the expression "distance to the current cursor position", it does not address the objection raised with regard to the expression "distance to the tubular structure", which the board stated seemed to refer to the distance of a new point ("current cursor position" CtxCurPoint) from the tubular structure.

12. The board notes that the present amended claims were filed in reaction to the board's communication annexed to the summons to oral proceedings. However, a basic requirement for accepting amended claims at such a late stage of the appeal proceedings is that all objections raised by the board have been at least addressed. In the present case, however, the board could not establish that all objections raised in its communication under Article 15(1) RPBA had been addressed by the appellant (see points 9 to 11 *supra*).
13. For the above reasons, the board, exercising its discretion under Article 13(1) RPBA, did not admit the amended claims to the appeal proceedings for reasons of procedural economy.

#### *Conclusions*

14. The board agrees with the appellant that the sole set of claims forms the "sole basis" for the present appeal. Since this set of claims has not been admitted into the appeal proceedings, there is no set of claims on the basis of which a further examination of the appeal

could be carried out by the board. Hence, the appellant's requests (see point XI *supra*), including those concerning a remittal of the case to the examining division, must be refused.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:

K. Boelicke

F. Edlinger