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**Datasheet for the decision
of 6 November 2015**

Case Number: T 0832/11 - 3.4.01

Application Number: 03756293.1

Publication Number: 1508051

IPC: G01R33/28

Language of the proceedings: EN

Title of invention:
MAGNETIC RESONANCE PROBES

Applicant:
Surgi-Vision, Inc.

Headword:

Relevant legal provisions:

EPC 1973 Art. 84
EPC Art. 123(2)

Keyword:

Claims - clarity (no) - support in the description (no)
Amendments - intermediate generalisation

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 0832/11 - 3.4.01

D E C I S I O N
of Technical Board of Appeal 3.4.01
of 6 November 2015

Appellant: Surgi-Vision, Inc.
(Applicant) 20 Firstfield Road, Suite 200
Gaithersburg, MD 20878-1762 (US)

Representative: Vossius & Partner
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 19 November
2010 refusing European patent application No.
03756293.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Assi
Members: F. Neumann
J. Geschwind

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division refusing European patent application number 03 756 293.1.
- II. The examining division refused the application because the claims on file at that time lacked clarity and support by the description (Article 84 EPC 1973), the amendments made to the claims infringed Article 123(2) EPC and the subject-matter of claim 1 lacked novelty (Article 54 EPC 1973).
- III. With the statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a set of amended claims.

As an auxiliary measure the appellant requested that the decision under appeal be set aside and that the application be remitted to the examining division for further prosecution.

In addition thereto, oral proceedings and refund of the appeal fee were requested.

- IV. The Board issued a summons to oral proceedings to take place on 6 November 2015.

With a communication dated 18 September 2015, the Board set out some provisional and non-binding remarks concerning essential features of the invention (Article 84 EPC 1973), added subject-matter (Article 123(2) EPC) and refund of the appeal fee (Rule 103(1)(a) EPC).

V. In response to the Board's communication, with letter of 23 October 2015, the appellant withdrew the request for oral proceedings.

Two new sets of claims, forming the basis of a new main request and a new first auxiliary request, were filed with the letter of 23 October 2015.

With letter of 3 November 2015 the appellant informed the Board that no-one would appear at the oral proceedings.

VI. The final requests of the appellant were as follows:

As a Main Request, that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-15 filed as a Main Request with the letter of 23 October 2015.

As a first Auxiliary Request, that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-13 filed as Auxiliary Request 1 with the letter of 23 October 2015.

As a further Auxiliary Request, that the decision under appeal be set aside and the application be remitted to the examining division with an order to continue with substantive examination thereof.

That the appeal fee be reimbursed.

VII. Oral proceedings before the Board took place on 6 November 2015 in the absence of the appellant.

VIII. Claim 1 of the Main Request reads as follows:

"A magnetic resonance probe (100) having a proximal portion (8) and a distal portion (7), comprising: a connector (9) disposed at a proximal end of the probe (100); a plurality of center conductor wires (101, 102, 103, 104), each center conductor wire including a conductive core and an insulator disposed about the core along at least a portion of the core to insulate the conductive cores of the center conductor wires from each other, the center conductor wires (101, 102, 103, 104) forming a first pole of a magnetic resonance dipole antenna, wherein the insulator of each of the center conductor wires is selected to facilitate coupling of high-frequency energy between the center conductor wires; a first dielectric layer (31) disposed collectively around the plurality of center conductor wires in the proximal portion (8) of the probe (100); an outer conductive layer (12) disposed about at least a portion of the first dielectric layer (31) and connected to the connector (9) at the proximal end of the probe (100), the outer conductive layer forming a second pole of a magnetic resonance dipole antenna; and a plurality of electrodes (3, 4, 5, 6) disposed on the distal portion of the probe, each electrode being coupled to a corresponding one of the center conductor wires (101, 102, 103, 104) and disposed on a surface of the probe, wherein each of the center conductor wires extends from the connector (9) to a respective one of the plurality of electrodes disposed at the distal portion of the probe, wherein the center conductor wires extend beyond the outer conductive layer to form a whip of the magnetic resonance dipole antenna."

Claim 1 of Auxiliary Request 1 is identical to claim 1 of the Main Request.

Reasons for the Decision

1. The appeal is admissible.
2. Main request
 - 2.1 Article 123(2) EPC
 - 2.1.1 Claim 1 has been amended to define that the outer conductor is "*connected to the connector (9) at the proximal end of the probe*". The only reference which can be found in the original application documents concerning the connection of the outer conductive layer to the connector is located on page 13, lines 17-18. This passage indicates that the "*outer conductive layer may extend through the probe 100 and terminate at the connector 9*". No basis could be found for defining the connection of the outer conductive layer to the connector without additionally defining the arrangement of the outer conductive layer with respect to the connector.

In this respect, claim 1 represents an intermediate generalisation of the originally-disclosed subject-matter.

- 2.1.2 Claim 1 has also been amended to define that the insulator "*is selected to facilitate coupling of high-frequency energy between the center conductor wires*". No basis can be found for the isolation of this feature from its original context which requires that the insulator properties should also be selected to lessen or inhibit coupling of low-frequency energy (page 14, lines 27-29).

2.1.3 In both of these aspects, the amendments to claim 1 do not fulfil the requirements of Article 123(2) EPC.

2.2 Article 84 EPC 1973

2.2.1 Claim 1 is directed to a magnetic resonance probe and defines a number of structural components of the magnetic resonance probe. However, some critical details regarding the arrangement and function of the components have been omitted from claim 1, leaving the definition of the probe both unclear and unsupported by the description in a number of aspects, as outlined below.

2.2.2 Claim 1 defines that *"each center conductor wire"* includes *"a conductive core and an insulator disposed about the core along at least a portion of the core to insulate the conductive cores of the center conductor wires from each other"*. Claim 1 goes on to define that *"the insulator of each of the center conductor wires is selected to facilitate coupling of high-frequency energy between the center conductor wires"*.

From the description it may be seen that the conductive cores have a very specific dual-functionality which is not apparent from the wording of claim 1. According to the description (page 13, lines 25-32), the insulators are disposed around the cores of the center conductors so as to enable the conductors to be brought within very close proximity to one another but to prevent contact between the cores. The insulator properties must be selected not only to facilitate coupling of high-frequency energy between the center conductor wires, but also to prevent coupling of low-frequency energy between the conductor cores (page 14, lines 27-29).

It is this dual-functionality of the conductor cores which enables the conductors to be individually used for transmitting measurement/stimulation/ablation signals on the one hand but to act as a single electrical entity for receiving the high frequency magnetic resonance signals on the other hand (page 13, line 25 to page 14, line 17). In this respect, the dual-functionality is essential to the definition of the invention.

Although it is clear from claim 1 that the insulator must be designed such as to facilitate coupling of high-frequency energy between the center conductor wires, it is not clear from the wording "*to insulate the conductive cores ... from each other*" under which conditions the cores are to be insulated to achieve the stated aim of preventing coupling of low-frequency energy between the conductor cores (page 14, lines 14-17). The failure to mention this essential feature in claim 1 means that claim 1 is not supported by the description.

- 2.2.3 Moreover, claim 1 defines that the magnetic resonance probe comprises a plurality of electrodes, without specifying either the nature of the probe or the nature of the electrodes.

The description consistently explains that the magnetic resonance probe is to be used in medical imaging procedures and that the electrodes are suitable for the recording of electrophysiological signals, the stimulation of tissue or the delivery of energy to tissue (page 1, lines 28-32; page 4, lines 2-13; page 18, lines 23-24; page 21, lines 7-20). Neither of these aspects is specified in claim 1. The general nature of

the "*magnetic resonance probe*" and the "*plurality of electrodes*" means that claim 1 encompasses alternatives which are not foreseen in the description. The full extent of claim 1, which is very general in these respects, is therefore not supported by the description.

- 2.2.4 Moreover, the wording of claim 1 does not make clear that it is the high-frequency coupling which causes the centre conductor wires to act as a single electrical entity at magnetic resonance frequencies and to thereby act as a first pole of a magnetic resonance dipole antenna.

Without a clear link in claim 1 between the cause and effect, it is not clear how the plurality of insulated centre conductor wires form the first pole of the magnetic resonance dipole antenna.

- 2.2.5 From the drawings (Figures 1, 2A, 2B, 2C) it may be seen that the first dielectric layer 31 and the outer conductive layer 12 do not extend into the distal portion 7 of the probe. The fact that the wording of claim 1 does not specify the axial extent of either the first dielectric layer or the outer conductive layer means that the wording encompasses the possibility that these layers are provided not only in the proximal portion 8 but may extend into the distal portion. Such an arrangement is not supported by the description.

Moreover, the fact that the axial extent of the proximal portion, the distal portion, the first dielectric layer and the outer conductive layer is not defined leads to a lack of clear structural definition of the various layers of the magnetic resonance probe.

2.2.6 For the above reasons, claim 1 does not meet the requirements of Article 84 EPC 1973.

2.3 In view of the above deficiencies, the main request is not allowable.

3. Auxiliary Request 1

3.1 Claim 1 of the first auxiliary request is identical to claim 1 of the main request and so, for the same reasons as given above, does not meet the requirements of the EPC.

Auxiliary Request 1 is therefore not allowable.

4. Remittal to the examining division

4.1 Since neither of the versions of the claims submitted as main and first auxiliary requests are allowable, there is no basis on which to remit the case to the examining division for further prosecution.

The appellant's "further Auxiliary Request" to remit the application to the examining division with an order to continue with substantive examination thereof is therefore also not allowable.

5. Reimbursement of the appeal fee

5.1 In accordance with Rule 103(1)(a) EPC, where the Board of Appeal deems an appeal to be allowable, the appeal fee shall be reimbursed, if such reimbursement is equitable by reason of a substantial procedural violation.

5.2 Since none of the preceding requests are allowable, the appeal fee cannot be reimbursed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



R. Schumacher

G. Assi

Decision electronically authenticated