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File Number: T 117/87 - 3.4.1  
Application No.: 79 302 462.1  
Publication No.: 0 011 946  
Title of invention: Programmable medical device

Classification: A61N 1/36

**D E C I S I O N**  
of 22 April 1991

Proprietor of the patent: Medtronic, Inc.

Opponent: Biotronik Mess- und Therapiegeräte GmbH & Co.

Headword:

EPC Articles 83 and 56

Keyword: "Notice of opposition filed at and accepted by the German Patent  
Office in Berlin admissible (yes)"  
"Disclosure of invention (yes) -"  
"Inventive step (yes, after amendment) -"

Headnote



Case Number : T 117/87 - 3.4.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.4.1  
of 22 April 1991

**Appellant :** Biotronik Mess- und Therapiegeräte GmbH & Co.  
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**Decision under appeal :** Decision of Opposition Division of the European  
Patent Office dated 14 January 1987 rejecting the  
opposition filed against European patent  
No. 0 011 946 pursuant to Article 102(2) EPC.

**Composition of the Board :**

**Chairman :** G.D. Paterson  
**Members :** H.J. Reich  
U.G. Himmler

## Summary of Facts and Submissions

- I. The Respondent is owner of European patent No. 0 011 946.
- II. The patent was opposed by the Appellant in particular on the ground of lack of inventive step in view of the prior art which can be derived from document:  
  
D1: DE-A-2 803 366.
- III. The Opposition Division rejected the opposition. It took the view that the cited prior art would not hint at all at the use of a permanent and a temporary memory in order to program a pacemaker temporarily to new values for performing diagnostic checks and thereafter to return to an operation according to the original values or to cause a permanent change to the new values.
- IV. An appeal against this decision was lodged by the Opponent, citing the following new documents:  
  
D3: Grundig Technische Informationen, 2/1978, pages 88-94;  
D4: EP-A-0 002 776;  
D5: US-A-3 830 242; and  
D6: DE-A-2 755 702;

and attacking the opposed patent additionally under Article 100a EPC in combination with Article 52(4) EPC, taking the view that whenever a different use of a known apparatus by a physician is the only reason for inventive step, this would be a circumvention of the non-patentability of methods for treatment of the human or animal body by surgery or therapy and of diagnostic methods practised on the human or animal body.

V. Before the Opposition Division the Respondent had inter alia requested rejection of the opposition as inadmissible, since it was not filed in time at the European Patent Office, but at the Berlin sub-office of the German Patent Office. In its decision dated 6 July 1988 the Board referred important points of law concerning the validity and effect of the Administrative Agreement dated 29 June 1981 (OJ EPO 1981, 381) to the Enlarged Board of Appeal under Article 112(1)(a) EPC (Decision T 117/87 dated 6 July 1988, OJ EPO 1989, 127). In the light of the resulting Decisions G 5/88, G 7/88, G 8/88, OJ EPO 1991, 137, the Board took the preliminary view that the Appellant's notice of opposition should be treated as if the EPO had received it in time, and resumed the examination of the appeal.

VI. In a communication accompanying a summons to oral proceedings, the Board under Article 114(1) EPC raised an objection based on Article 56 EPC to Claim 1 referring, inter alia, to document D1 and newly introduced Search Report document:

D2: US-A-4 102 345.

VII. Oral proceedings were held on 22 April 1991, during which the Appellant requested that the decision under appeal be set aside and that the patent be revoked.

In response to the Board's communication, the Respondent requested to maintain the patent with an amended text filed during oral proceedings, comprising:

**Claims:** 1 to 12 as filed during oral proceedings;  
**Description:** Columns 1, 2 and 5 to 75 of the patent as granted;

Columns 3 and 4 as filed during oral proceedings;

**Drawings:** According to the patent as granted.

Claim 1 reads as follows:

"1. A programmable medical device capable of being programmed by a programming signal received from an external source, comprising permanent memory means (140) for storing programming signal data for controlling the operating conditions of the medical device for an indefinite time period, temporary memory means (132) for storing programming signal data for controlling the operating conditions of the medical device for a temporary time period, detector means (108, 110, 116, 130, 136) for detecting the programming signal and providing the signal data for controlling the operating conditions of the medical device and a further signal indicative of whether the device is to be permanently or temporarily programmed with the received signal data, and logic circuit means (138, 140C, D, F, G) responsive to the further signal for applying the signal data to the temporary memory means, for providing said certain signal data of said temporary memory means to said medical device in place of the signal data applied thereto from said permanent memory means in the event the further signal indicates a temporary operating condition change is to be programmed, and for transferring certain of the signal data in said temporary memory means to said permanent memory means if the further signal indicates a permanent operating condition change is to be programmed".

Claims 2 to 12 are dependent on Claim 1.

VIII. In support of his request, the Appellant essentially submitted that Claim 1 would not be allowable under Articles 83 and 56 EPC for the following reasons:

- (a) A skilled person would use a RAM (random access memory) as temporary memory and a ROM (read only memory) as a permanent memory. However, in a ROM the permanent information cannot be changed. Hence, a skilled person would not be able to carry out the claimed invention.
- (b) Claim 1 would teach that the further signal for a permanent operation condition change enables a data flow to the permanent memory simultaneously from the external source and from the temporary memory, the further signal controlling as well a distributing switch between the external source and both memories as the logic circuit means between temporary and permanent memory. Such two-fold data flow, i.e. a direct entry of permanent data and their replacement by temporary data, controlled by only one signal would be contradictory and not realisable.
- (c) The claimed subject-matter differs from the device of document D1 mainly in that some signals are transferred in between different parts of a register. Such a transfer would be known from document D2 or document D4, so that the claimed subject-matter is obvious.

IX. The above submissions were contested by the Respondent, who argued essentially as follows:

- (a) Claim 1 defines clearly in functional terms what each memory does. For storing data not permanently but "for an indefinite time period" as claimed, a skilled person would never use a ROM.

(b) A distributing switch between the external source and both memories is not comprised in the claimed subject-matter. The wording of the logic circuit means is clearly defined in Claim 1 in functional terms, i.e. loading new data into the temporary memory, gating them through the permanent memory without affecting the data stored therein, and - after a test - loading the new data from the temporary to the permanent memory. The embodiments in Figures 5 and 6 of the patent would give sufficient guidance to carry out the claimed invention.

(c) None of the cited documents proposes the above functioning or uses two separate memories, i.e. a temporary and a permanent one, in particular not in order to enable a fall back possibility to the old data.

X. At the conclusion of the oral proceedings, the Decision was announced that the patent was maintained with amended text as filed at the oral proceedings.

#### Reasons for the Decision

1. Though the Respondent has abandoned his objection that the Appellant's notice of opposition should be held inadmissible, the Board points out the following: In view of the Enlarged Board's Decision G 5/88, G 7/88 and G 8/88, OJ EPO 1991, 137, point 3.3, documents which - before 1 July 1989 - were delivered to and accepted by the German Patent Office in Berlin and which were recorded with a date of receipt, are to be treated by the EPO as if it had received them directly.

In the Board's view, the exclusion of documents filed by hand in answer (ii) of the Order of the Enlarged Board's Decision is to be interpreted in the light of paragraph 4 of said Agreement (which states that the German Patent Office should not accept documents intended for the EPO and brought by hand), as well as point 3.3 of the Decision referred to above. The Appellant's notice of opposition was recorded with a date of receipt by the German Patent Office, and is, therefore, deemed to have been filed at the EPO on that very day, pursuant to the said Agreement and the Enlarged Board's Decision. Accordingly, the opposition is admissible.

2. Documents D3 to D6, which were cited for the first time in the Grounds of Appeal, have been examined by the Board according to Article 114(1) EPC with the result that they have no influence on the decision to be taken, and are, therefore, disregarded under Article 114(2) EPC.
3. There is no formal objection under Articles 123(2) or (3) EPC to the current version of the claims, description and drawings. In particular, present Claim 1 comprises the subject-matter of Claims 1 and 3 of the published patent specification. Present Claims 2 to 12 are identical with granted Claims 2 and 4 to 13 respectively. The subject-matter of granted Claims 1 to 13 corresponds to that of original Claims 1 to 13.
4. **Disclosure of the Invention**
  - 4.1 The Board regards the embodiment represented in Figures 6A to 6N of the patent under appeal to be technically consistent with the subject-matter of Claim 1 and to give sufficiently precise information in order to enable a skilled person to carry out the invention claimed in Claim 1 (Article 83 EPC) for the reasons set out below:



- 4.2 Figure 6E of the patent under appeal clearly teaches to use as a storage element for the permanent memory not a ROM unit - see the Appellant's submission on paragraph VIII(a) - but a feed back loop which consists of a series circuit of two inverters (140A, 140B) and a transmission gate (140C) which loop is connected to a write gate (140D) and to a read gate (140G). Thus, the specification of the patent under appeal leads a skilled person explicitly to use as permanent memory unit a loop with changeable information stored therein.
- 4.3 The Board is unable to interpret the wording of present Claim 1 - as the Appellant does - in that its technical subject-matter comprises means which function as a distributing switch between the external source and both memories, allowing a direct programming of the permanent memory; see paragraphs VIII(b) and IX(b) above. There is also no support for such an interpretation in the description of the patent under appeal. The embodiment represented in Figure 6 of the patent specification teaches to decode the further signal in status decoding means (130, 136 in Figure 6A) into a temporary and a permanent status signal. The skilled person derives from Figure 6 unambiguously to apply (via 6, 81, J, 138V, N) the temporary status signal to a transmission gate (140F) in order to "provide - as claimed in Claim 1 - certain signal data of the temporary memory (see output 132-2) to the medical device in place of the signal data applied thereto from said permanent memory means (read gate 140G closed)" and to apply (via 7, 79, K, 138Q, O) the permanent status signal to a write gate (140F) for "transferring - as claimed in Claim 1 - certain of the signal data in the temporary memory means (see output 132-2) to the permanent memory means (140; transmission gate 140F closed)". Hence, insofar as the claimed logic circuit functions can be interpreted on the basis of the wording

of Claim 1 and the disclosure in the overall specification as comprising a distributing switch, this switch is coupled not to the input but - contrary to the Appellant's interpretation according to paragraph VIII(b) - coupled to the output of the temporary memory. Such a coupling corresponds to a switch position between the temporary memory (on the entry side of the switch) and the permanent memory on the one hand, and the medical device on the other hand (on the output side of the switch), allowing to apply the data stored in the temporary memory either to the medical device or to transfer them to the permanent memory. A coupling of the input (140D) of the permanent memory to the output (3535) of the detector means (116) allowing to transfer the signal data for controlling the operation conditions of the medical device into the permanent memory without passing the temporary memory, in the Board's view, is neither derivable from the functional features in Claim 1 defining the logic circuit means nor disclosed in the embodiment of Figure 6; see in particular Figures 6D and 6E. As shown in detail above, the Board finds that Claim 1 in its current version is clearly narrowed to an indirect application of the signal data to the permanent memory via the temporary memory.

4.4 For the reasons set out in paragraphs 4.1 to 4.3 above the Board is convinced that the specification of the patent under appeal gives a skilled person sufficient guidance to carry out the invention claimed in present Claim 1 and thus satisfies Article 83 EPC.

5. Inventive step

5.1 The Appellant concedes implicitly that Claim 1 is novel, in particular over document D1; see paragraph VIII(c). Thus, the only further substantive issue raised in this appeal is that of inventive step.

5.2 Document D1 discloses in the wording of Claim 1:

"A programmable medical device (see D1, 10 in Figure 1) capable of being programmed by a programming signal received from an external source (22 in Figure 1) comprising memory means (92 in Figure 5), detector means (84 in Figure 5) for detecting the programming signal (from 28) and providing the signal data for controlling the operating conditions of the medical device (stages S5 to S8 of 84; page 26, lines 1 to 3) and a further signal (stages S2 to S4 of 84; page 25, lines 25-28) and logic circuit means (90 in Figure 5 and 38 in Figure 1) responsive to the further signal for applying the signal data to the memory means and for providing said certain signal data of said memory means to said medical device."

5.3 Starting from this nearest prior art as disclosed in document D1, the objective problem underlying the present invention as claimed in Claim 1 is to provide a medical device which maintains old operating data stored while allowing the medical device to be operated on the basis of new operating data for a temporary time period and to eventually replace the stored old operating data by the new ones, enabling thus a fall back possibility to the old data; see the patent under appeal, column 3, lines 61 to 65, column 4, lines 1 to 3 and 11 to 15 and paragraph IX(c) above.

5.4 This problem is solved according to Claim 1 by the following alteration steps of the device known from document D1:

(a) subdividing the known memory means into temporary and permanent ones so that there are provided:

"permanent memory means for storing programming signal data for controlling the operating conditions of the medical device for an indefinite time period, and temporary memory means for storing programming signal data for controlling the operating conditions of the medical device for a temporary time period;

- (b) rendering the known detector means and the known further signal indicative "of whether the device is to be permanently or temporarily programmed with the received signal data"; and
- (c) reorganising the known logic circuit means so that it is suited in response to the further signal:
  - (α) "for applying the signal data to the temporary memory means";
  - (β) "for providing said certain signal data of said temporary memory means to said medical device in place of the signal data applied thereto from said permanent memory means in the event the further signal indicates a temporary operation condition change is to programmed"; and
  - (γ) "for transferring certain of the signal data in said temporary memory means to said permanent memory means if the further signal indicates a permanent operating condition change is to be programmed".

5.5 Contrary to the Appellant's view according to paragraph VIII(c), none of the documents cited in the present proceedings gives a skilled person any hint to create the distinguishing features (a), (b) and (c) mentioned in paragraph 5.4 above. Document D2 comprises no

memory means at all and is switched over from a permanent non-forced demand mode to a forced demand mode (as a test mode) via a magnetically operable reed switch. Late-mentioned document D3 pertains to a different technical field (television). All further documents cited by the parties or in the Search Report describe medical devices with either no memory or a memory wherein once stored program data remains unchanged.

- 5.6 Hence, a skilled person is not able to find in the cited prior art any incitation to provide an optional two-step flow of stored program data (see features (α) and ( ) above) within a memory means of a medical device, i.e. to reorganise the address function of a logic circuitry in such a way that already stored program data are optionally transferred to a different storage location within the storage capacity provided altogether in that device. Due to the fact that the inventive step implied by the subject-matter of Claim 1 lies thus in a non-obvious constructional alteration exclusively of three-dimensional technical circuit elements (hardware) and not in any medical effect or medical advantage during its use, the corresponding objection under Article 52(4) EPC of the Appellant (see paragraph IV) is not relevant.
- 5.7 For the above reasons, the Board finds that the subject-matter of Claim 1 involves an inventive step within the meaning of Article 56 EPC.
6. Hence, it follows that amended Claim 1 is allowable. Dependent Claims 2 to 12 concern particular embodiments of the medical device according to Claim 1 and are, therefore, likewise allowable.

**Order**

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

1. The Decision of the Opposition Division is set aside.
2. The case is remitted to the first instance with an order to maintain the patent with an amended text filed during oral proceedings, comprising:

Claims 1 to 12 as filed during oral proceedings; the description according to columns 1, 2 and 5 to 75 of the patent as granted and columns 3 and 4 as filed during oral proceedings;  
the drawings of the patent as granted.

**The Registrar:**

**The Chairman:**

**P. Martorana**

**G.D. Paterson**