Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 19 May 2020

Case Number: T 2360/15 - 3.4.03

Application Number: 07826255.7

Publication Number: 2068715

IPC: A61B8/00, G09B23/00

Language of the proceedings: EN

Title of invention:
MEDICAL SYSTEM WITH COMPREHENSIVE REPORT SIMULATION FEATURE

Applicant:
Koninklijke Philips N.V.

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no) - obvious combination of known features - common general knowledge

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2360/15 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 19 May 2020

Appellant: (Applicant)	Koninklijke Philips N.V. High Tech Campus 52 5656 AG Eindhoven (NL)
Representative:	de Haan, Poul Erik Philips International B.V. Philips Intellectual Property & Standards High Tech Campus 5 5656 AE Eindhoven (NL)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 7 July 2015 refusing European patent application No. 07826255.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	G. Eliasson
Members:	J. Thomas
	B. Müller

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse European patent application No. 07 826 255.7 on the grounds that the subject-matter of claims 1 of the main request and the auxiliary request did not involve an inventive step within the meaning of Article 56 EPC 1973.

II. In response to the communication of the Board annexed to the summons to oral proceedings, with a letter of 23 March 2020 the appellant submitted a new main request and an auxiliary request.

III. At the oral proceedings before the Board, the appellant submitted two further requests for the event that the previous requests were found not allowable. At the end of the oral proceedings, the appellant requested that the decision under appeal be set aside and a patent be granted on the basis of

- claims 1 to 6 of the main request, or
- claims 1 to 6 of the auxiliary request, both requests filed with letter of 23 March 2020; or
- claims 1 to 6 of the "First Auxiliary Request OP", or
- claims 1 to 5 of the "Second Auxiliary Request OP", both requests filed at the oral proceedings on 19 May 2020.

IV. Reference is made to the following document:

D1: US 2005/0054927 A1.

V. Claim 1 of the **main request** reads as follows:

In a medical ultrasound system, a method for creating a comprehensive report simulation, the method comprising:

storing patient data and raw data corresponding to ultrasound signals in a first database contained in the medical ultrasound system (300-320);

causing the system to enter in a report simulation mode (330) so that the medical ultrasound system is forced to behave as if an actual exam was taking place by taking simulated data as input for the report instead of input from ultrasound input devices and users;

providing the simulated data by processing the raw data to obtain data corresponding to ultrasound images and the patient data (340); and

creating a simulated report (350) based on the simulated data provided as input.

VI. Claim 1 of the **"Auxiliary Request"** reads as follows (the Board underlined or struck through the amendments compared to the main request):

In a medical ultrasound system, a method for creating a comprehensive report simulation, the method comprising:

storing patient data<u>,</u> ~~and~~ raw data corresponding to ultrasound signals<u> and user input</u> in a first database contained in the medical ultrasound system (300-320);

causing the system to enter in a report simulation mode (330) so that the medical ultrasound system is forced to behave as if an actual exam was taking place by

taking simulated data as input for the report instead of input from ultrasound input devices and users;

providing the simulated data by processing the raw data to obtain data corresponding to ultrasound images and the patient data (340) and the user input; and

creating a simulated report (350) based on the simulated data provided as input.

VII. Claim 1 of the **"First Auxiliary Request OP"** reads as follows (the Board underlined or struck through the amendments compared to the main request):

In a medical ultrasound system, a method for creating a comprehensive report simulation, the method comprising:

storing patient data, ~~and~~ raw data corresponding to ultrasound signals and user input for later re-play and simulation in a first database contained in the medical ultrasound system (300-320);

causing the system to enter in a report simulation mode (330) so that the medical ultrasound system is forced to behave as if an actual exam was taking place by taking simulated data as input for the report instead of input from ultrasound input devices and users;

providing the simulated data by processing the raw data to obtain data corresponding to ultrasound images and the patient data (340) and the user input; and

creating a simulated report (350) based on the simulated data provided as input.

VIII. Claim 1 of the **"Second Auxiliary Request OP"** reads as follows (the Board underlined or struck through the amendments compared to the main request):

In a medical ultrasound system, a method for creating a comprehensive report simulation, the method comprising:

storing patient data, ~~and~~ raw data corresponding to ultrasound signals and user input in a first database contained in the medical ultrasound system (300-320);

causing the system to enter in a report simulation mode (330) so that the medical ultrasound system is forced to behave as if an actual exam was taking place by taking simulated data as input for the report instead of input from ultrasound input devices and users;

providing the simulated data by processing the raw data to obtain data corresponding to ultrasound images, ~~and~~ the patient data (340) and the user input, providing the simulated data further comprises using a user selected subset of all possible combinations of patient data (345) and processed raw data from the database; and

creating a simulated report (350) based on the simulated data provided as input.

Reasons for the Decision

1. The appeal is admissible.

2. Main request

2.1 In the decision under appeal the examining division and the appellant considered document D1 as closest prior art and discussed inventive step starting from document D1 in combination with the common knowledge of the skilled person.

2.2 Disclosure of document D1

Document D1 shows the following features, with the references in brackets referring to the corresponding passages of document D1: a medical ultrasound system (title, figure 1), comprising a method for creating a comprehensive report ([0022], 80) ~~simulation~~, the method comprising:

storing patient data and raw data corresponding to ultrasound signals in a first database contained in the medical ultrasound system (64, 60, [0021]);

~~causing the system to enter in a report simulation mode so that the medical ultrasound system is forced to behave as if an actual exam was taking place by taking simulated data as input for the report instead of input from ultrasound input devices and users~~;

providing the ~~simulated~~ stored data by processing the raw data to obtain data corresponding to ultrasound images and the patient data (figure 2; [0021] and [0024]); and

creating a ~~simulated~~ report ([0022], 80) based on the ~~simulated~~ data provided as input.

2.3 The Board agrees that document D1 is an appropriate starting point for a discussion of inventive step with respect to the subject-matter defined in claim 1.

2.4 Distinguishing features

The method defined in claim 1 differs from the disclosure of document D1 by the feature "*causing the system to enter in a report simulation mode (330) so that the medical ultrasound system is forced to behave as if an actual exam was taking place by taking simulated data as input for the report instead of input from ultrasound input devices and users".*

The "*simulated data*" and the "*simulated report*" cannot be distinguished from real data and a real report like the ones cited in document D1. The differences between these features (simulated data versus real data and a simulated report versus a real report) are only in nomenclature, the simulated features being technically not distinguishable from the corresponding features known from document D1.

According to the wording of claim 1, the "*simulated data*" are based on raw data related to the ultrasound images and the patient data, both data types being the basis of the "real-time" medical report in document D1.

The formulation "*instead of input from ultrasound input devices and users*" does not necessarily include a "user input" in the simulated data. It only specifies that data from external units are not required for running the simulation mode, but it does not include user input in the simulated data. Hence, a user input besides raw data and patient data cannot be considered a limiting feature of claim 1.

2.5 Objective technical problem

The effect achieved by implementing the simulation mode is seen in the possibility of demonstrating the device without the patient and allowing a realistic comparison

of a simulated report with corresponding reports generated by other devices.

2.6 Obviousness

2.6.1 In the decision under appeal, the examining division was of the opinion that the subject-matter defined in claim 1 was an obvious straightforward automation of the teachings of document D1. The creation of the report, as far as it went beyond the pure presentation of cognitive (non-technical) information, was only a question at what point in time the relevant data were processed.

2.6.2 The Board finds that when starting from document D1, the implementation of a simulation mode is a straightforward solution to the above-mentioned problem. All data which are necessary for the creation of a simulated report according to the definition in claim 1 of the main request (raw data corresponding to ultrasound images and patient data) are already stored in the device known from document D1 and used therein for the creation of reports. There is hence no need to modify the structural units of the device. Only the processing unit would have to be programmed in order to allow for a time-delayed creation of a simulated report, for example for demonstration purposes without a connected ultrasound probe and without performing direct, real-time measurements.

2.6.3 The appellant argued that document D1 did not hint at the objective problem and should therefore not be considered for any inventive-step argumentation. Document D1 focused on the problem of the proper configuration of the device and did not hint at a simulation mode.

For the following reasons the Board is of a different opinion: the distinguishing feature in question only relates to how to create a time-delayed report. This applies in particular for situations when the ultrasound probe is not connected to the device, as for example during trade fairs, and without the presence of any "patient". Although document D1 focuses on the configuration of the device, the final output of the device of D1 is the creation of a medical report. It provides all the necessary structural features therefor (data storage devices 60 and 64 and processing unit 50 transforming the relevant data to a medical report). Hence, the skilled person would without doubt consider the teachings of document D1 in the present case and would realise that the only required modifications would entail straightforward reprogramming of the device.

2.7 The subject-matter of claim 1 of the main request does consequently not involve an inventive step, contrary to the requirements of Articles 52(1) and 56 EPC 1973.

3. "Auxiliary Request"

3.1 The amendment with respect to claim 1 of the main request concerns the simulated data which are specified to be not only based on raw data and patient data, but also on user input (see paragraph [0016] of the description).

Concerning the meaning of "user input", the description indicates that it concerns for example "sizes and performance parameters of various internal organs" (see [0005] of the description).

3.2 Distinguishing feature

In addition to the above mentioned distinguishing feature of claim 1 of the main request, claim 1 of the "Auxiliary Request" defines that for the provision of the simulated data "user input" is taken into account as further additional input data.

3.3 Objective technical problem

The effect achieved by using "user input" in addition to raw data and patient data to provide the simulated data is seen in the possibility of creating a report which is more reliable and better comparable to reports from other devices.

3.4 Obviousness

3.4.1 In case the "user input" could be construed as going beyond pure cognitive information, which is considered not to make any technical contribution, the Board notes that, in the device of document D1, the user or sonographer inputs information (paragraph [0022] and paragraph [0024], last sentence). Hence, document D1 discloses "user input" for the creation of the report. Therefore, the skilled person would include not only the raw data and the patient data but also the user input in the simulated data, if this was necessary for a reliable comparison of the simulated report with reports from other devices.

3.4.2 The appellant argued that document D1 did not hint at including user input data in the report. Other data, like video streams, could also be considered.

This argument could not convince the Board because the meaning of "user input" is vague and could even include other kinds of data (i.e. video streams) which might even be directly related to patient data. Hence, the use of "user input" is considered disclosed in document D1.

3.5 The subject-matter of claim 1 of the "Auxiliary Request" consequently does not involve an inventive step in the meaning of Articles 52(1) and 56 EPC 1973.

4. "First Auxiliary Request OP"

4.1 Admission of the "First Auxiliary Request OP"

Pursuant to Article 13(1) RPBA 2007, the Board admitted the "First Auxiliary Request OP" into the proceedings, because the amendment did not add significantly to the complexity of the claims. Its examination did not require considerable additional workload for the Board and a decision on it could be taken without delay.

4.2 Amendment

In addition to the auxiliary request the amendment defines that the stored patient data, the raw data and the user input are stored "for later re-play and simulation". This amendment has a basis in paragraph [0016] of the description as originally filed (Article 123(2) EPC).

4.3 Distinguishing feature

The feature, introduced in this request, concerns the wording "for later re-play and simulation" in the step

of storing the data. Compared to the previous request, no additional technical information can be related to this additional formulation. In the "Auxiliary Request" the stored patient data, raw data and user input were considered for the provision of the simulated data. Hence, the stored data was already implicitly considered to be used "for later simulation". The formulation "for later re-play" does not add any additional technical information either, because the cited data is by default stored for later "re-play" in a report. Otherwise the storage of data would make no sense. Thus, the above-presented argumentation for the "Auxiliary Request" also applies in unchanged form to this request.

4.4 The subject-matter of claim 1 of the "First Auxiliary Request OP" therefore does not involve an inventive step in the meaning of Articles 52(1) and 56 EPC 1973.

5. "Second Auxiliary Request OP"

5.1 Admission of the "Second Auxiliary Request OP"

Claim 1 of the "Second Auxiliary Request OP" combined all features of the "Auxiliary Request" and the auxiliary request on which the decision of the examining division was based.

Even though the appellant could have filed this "Second Auxiliary Request OP" earlier, the Board nevertheless admitted this request pursuant to Article 13(1) RPBA 2007 into the proceedings, because the examining division's opinion on the amended matter was known. Hence, the Board could examine the request and take a decision without significant extra-work and time.

5.2 Amendment

The feature added in claim 1 concerned the use of a "user selected subset of all possible combinations of patient data and processed raw data from the database". This feature has sufficient basis in claim 6 of the originally filed claims, so that the requirements of Article 123(2) EPC are fulfilled.

5.3 Distinguishing feature

The amended feature concerns, in addition to the distinguishing feature of the "Auxiliary Request", the possibility that the simulated data can be based on a user selection out of a subset of all possible combinations of patient data and processed raw data from the database.

5.4 Objective technical problem

The effect achieved by the distinguishing features is the possibility to present the device in relation to various and different medical issues and to create simulated reports which are comparable to reports from other devices.

5.5 Obviousness

The Board notes that - as pointed out by the examining division - the wording of claim 1 defines features more explicitly which were already implicitly included in the previous requests. It is common practice that a clinical information system gathers and stores all available information of every patient. Document D1 discloses that the report is created based on one or

more protocol codes entered by the user ([0024]). Based on these protocol codes the corresponding parameters are derived from the clinical information system ([0021] and [0024]). Consequently, the newly introduced feature is at least implicitly known from document D1. Their consideration in a simulated report must therefore be taken for granted by the skilled person, since the selection of one specific subset from all possible data combinations in connection with patient data is standard and also hinted at in document D1.

In addition, the simulated report is created in order to allow the presentation of the device without a real-time examination of a patient (for example during a trade fair). In order to allow the presentation of the device to potential clients from various medical specialities (for example orthopaedic doctors, paediatricians or any other specialists in any medical field), the provision of different data related to different "model patients" (infants, children, middle-aged or elderly patients etc.) seems the most obvious straightforward organisation of the stored data. To allow the use of a user-selected subset for the creation of the report presents consequently an obvious straightforward solution to the skilled person.

5.6 The appellant's argument that the combination of several distinguishing features now defined in claim 1 were not hinted at in D1 and should render the defined subject-matter inventive could not convince the Board. As discussed above, the distinguishing features are either of non-technical content or implicitly known from D1.

5.7 Hence, the subject-matter of claim 1 of the "Second Auxiliary Request OP" does not involve an inventive step (Articles 52(1) and 56 EPC 1973).

6. Since none of the requests is allowable, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero G. Eliasson

Decision electronically authenticated