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**Datasheet for the decision
of 17 January 2024**

Case Number: T 0793/20 - 3.5.04

Application Number: 14724731.6

Publication Number: 3143599

IPC: G06T19/20

Language of the proceedings: EN

Title of invention:

INDICATION-DEPENDENT DISPLAY OF A MEDICAL IMAGE

Applicant:

Brainlab AG

Headword:

Relevant legal provisions:

RPBA 2020 Art. 12(4), 13(2)

EPC Art. 54, 56

Keyword:

Amendment to case - main request and first and second auxiliary requests - admitted (yes)

Novelty - main request (yes)

Inventive step - main request and first to fifth auxiliary requests (no)

Amendment after summons - sixth to eleventh auxiliary requests - exceptional circumstances (no) - cogent reasons (no)

Decisions cited:

T 0641/00, T 0478/06

Catchword:



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Case Number: T 0793/20 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 17 January 2024

Appellant: Brainlab AG
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81829 München (DE)

Representative: SSM Sandmair
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 13 November
2019 refusing European patent application
No. 14724731.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair B. Willems
Members: F. Sanahuja
G. Decker

Summary of Facts and Submissions

- I. The appeal is against the examining division's decision to refuse European patent application No. 14 724 731.6.
- II. The documents cited in the decision under appeal included the following:
- D1 R. Tschirley et al., "*Patient-oriented Segmentation and Visualization of Medical Data*", Proceedings of the Fifth IASTED International Conference COMPUTER GRAPHICS AND IMAGING, Kaua'i, Hawaii, USA, 12 to 14 August 2002, pages 214 to 219
- III. The application was refused on the following grounds.
- (a) The subject-matter of claims 1 to 7 and 10 to 15 of the then-pending main request was not new over D1 (Article 54 EPC), and that of claims 8 and 9 lacked inventive step over the disclosure of D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).
- (b) The subject-matter of claims 1 to 15 of the then-pending first and second auxiliary requests lacked inventive step over the disclosure of D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).
- IV. The applicant (appellant) filed notice of appeal. With its statement of grounds of appeal, the appellant filed an amended main request and amended first and second auxiliary requests. It submitted that the claims of

these requests were identical in substance to the claims of the main request and the first and second auxiliary requests on which the decision under appeal was based and included only editorial changes. Furthermore, it filed the main request and the first and second auxiliary requests on which the decision was based as third to fifth auxiliary requests. Moreover, it indicated a basis for the claims in the application as filed and provided arguments to support its opinion that the subject-matter of claim 1 of all the requests was new and involved an inventive step.

- V. The appellant was summoned to oral proceedings. In a communication under Article 15(1) RPBA 2020 the board gave the following preliminary opinion.
- (a) The board was minded to exercise its discretion under Article 12(4) RPBA 2020 by admitting the main request and the first and second auxiliary requests into the appeal proceedings.
 - (b) The examining division's conclusion that the subject-matter of claim 1 lacked novelty in view of the disclosure of document D1 was incorrect.
 - (c) The subject-matter of claims 1 and 12 to 15 of the main request and the first to fifth auxiliary requests lacked inventive step over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).
- VI. With its letter dated 15 December 2023, the appellant submitted amended claims of sixth to eleventh auxiliary requests. It indicated a basis for the amendments in the application as filed and submitted reasons why

these requests should be admitted into the appeal proceedings and why, in its opinion, the claims of all the requests met the requirements of Article 56 EPC.

VII. The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request filed with the statement of grounds of appeal, or alternatively, of the claims of one of the first to fifth auxiliary requests filed with the statement of grounds of appeal, or of the claims of one of the sixth to eleventh auxiliary requests filed with the letter dated 15 December 2023.

VIII. On 17 January 2024, the board held oral proceedings.

At the end of the oral proceedings, the chair announced the board's decision.

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

"A medical data processing method of determining an image of an anatomical structure of a patient's body, the method comprising the following steps which are constituted to be executed by a computer:

- a) acquiring (S1) atlas data describing an image-based model of at least part of a human body comprising the anatomical structure;
- b) acquiring (S1) patient medical image data describing a patient-specific medical image of the anatomical structure in the patient's body, wherein the patient medical image data comprises in particular three-dimensional image information;

- c) determining (S2), based on the atlas data and the patient medical image data, atlas-patient transformation data describing a transformation between the image-based model and the anatomical structure in the patient's body;
- d) acquiring (S3, S4) medical indication data describing a medical indication which the anatomical structure is subject to;
- e) acquiring (S7) imaging parameter data describing at least one imaging parameter for generating, from the image-based model, an image of the anatomical structure in dependence on the medical indication data; and
- f) determining (S8) indication image data describing an indication-specific image (1) of the anatomical structure in the patient, wherein the indication image data is determined (S8) based on the patient medical image data and the atlas-patient transformation data and the medical indication data and the imaging parameter data,

characterized in that

the imaging parameter defines a perspective onto the image-based model of the anatomical structure."

X. Claim 1 of the **first auxiliary request** differs from claim 1 of the main request in that feature e) and the text after feature f) have been amended as follows (with additions being underlined):

- e) "acquiring (S7) imaging parameter data describing at least one imaging parameter for generating, from

the image-based model, an image of the anatomical structure in dependence on the medical indication data, wherein the imaging parameter data contains positional information which is defined in a coordinate system used for defining the image-based model; and"

...

"characterized in that

the imaging parameter defines a perspective onto the image-based model of the anatomical structure and in that the indication image data is determined by transforming, by applying the transformation to the imaging parameter data, the positional information contained in the imaging parameter data into a coordinate system defining positions in the patient medical image data."

- XI. Claim 1 of the **second auxiliary request** differs from claim 1 of the first auxiliary request in that the text after feature f) has been amended as follows (with additions being underlined and deletions being ~~struck through~~):

~~"characterized in that~~

wherein the imaging parameter defines a perspective onto the image-based model of the anatomical structure ~~and in that~~ the indication image data is determined by transforming, by applying the transformation to the imaging parameter data, the positional information contained in the imaging parameter data into a coordinate system defining positions in the patient medical image data,

characterized in that

the atlas-patient transformation data is determined by applying a fusion algorithm to the atlas data and the patient medical image data, wherein the image-based model is fused to the patient-specific medical image."

- XII. Claim 1 of the **third to fifth auxiliary requests** differs from claim 1 of the main request and the first and second auxiliary requests, respectively, in that a semicolon at the end of feature b) has been removed.
- V. Claim 1 of the **sixth auxiliary request** differs from claim 1 of the main request in that feature e) and the text after feature f) have been replaced with:
- e) "acquiring (S7) imaging parameter data describing at least one imaging parameter for generating, from the image-based model, an image of the anatomical structure in dependence on the medical indication data, wherein the imaging parameter defines a perspective onto the image-based model of the anatomical structure; and"
- ...
- "characterized by
- g) generating, based on the imaging parameter, the patient medical image data."
- VI. Claim 1 of the **seventh auxiliary request** differs from claim 1 of the sixth auxiliary request in that the text after feature f) has been amended as follows (with

additions being underlined and deletions being ~~struck through~~):

"characterized ~~by~~ in that

g) acquiring the patient medical image data comprises generating, based on the imaging parameter, the patient medical image data."

VII. Claim 1 of the **eighth auxiliary request** differs from claim 1 of the sixth auxiliary request in that the text after feature f) has been replaced with:

"characterized by

g) determining, based on the imaging parameter data, control signals for controlling a medical imaging device; and

h) adjusting the imaging geometry of the medical imaging device according to the control signals."

VIII. Claim 1 of the **ninth auxiliary request** differs from claim 1 of the eighth auxiliary request in that feature h) has been amended as follows (with additions being underlined):

h) "adjusting the imaging geometry of the medical imaging device according to the control signals in order to generate the patient-specific medical image such that the imaging geometry corresponds to the information defined by the imaging parameter."

IX. Claim 1 of the **tenth and eleventh auxiliary requests** differs from claim 1 of the eighth and ninth auxiliary requests, respectively, in that the following feature

has been introduced after feature f) and the subsequent features have been renamed accordingly:

- g) "determining display control data comprising information usable to control a display device to display the indication-specific image,"

Reasons for the Decision

- 1. The appeal is admissible.
- 2. *Main request and first and second auxiliary requests - admittance (Article 12(4) RPBA 2020)*

- 2.1 Under Article 12(2) and (4) RPBA 2020, a submission constitutes an amendment if it is not directed to the requests, facts, objections, arguments and evidence on which the decision under appeal was based. Any such amendment may be admitted only at the board's discretion.

The board must exercise its discretion in view of, *inter alia*, the complexity of the amendment, the suitability of the amendment to address the issues which led to the decision under appeal, and the need for procedural economy.

- 2.2 In the case in hand, the editorial changes to the main request and the first and second auxiliary requests do not substantially change the subject-matter of the proceedings. Thus, the board, exercising its discretion under Article 12(4) RPBA 2020, admits these requests into the appeal proceedings.

3. *Main request - novelty (Article 54(1) EPC)*

3.1 An invention is to be considered new if it does not form part of the state of the art (Article 54(1) EPC).

3.2 Document D1 discloses a disease-specific visualisation method of a patient's anatomical structure using patient data imagery, a presentation database and an anatomic atlas (see abstract and section 2, the third paragraph in the right-hand column on page 214).

The patient data imagery and an anatomic atlas are registered (see the second paragraph in the right-hand column on page 215). Registration is known in the art as transforming data to be aligned onto a coordinate system. The appropriate type of visualisation - presentation sequence - is selected from the presentation database on the basis of, among other things, the specific disease code associated with the patient data imagery (section 2.1, second and third paragraphs in the left-hand column on page 215). The presentation sequence determines which information to show to the patient and in what manner (first paragraph in the right-hand column on page 215).

3.3 In the statement of grounds of appeal (see the first and fourth paragraphs in section 1.2), the appellant contested the examining division's finding that document D1 disclosed imaging parameter data within the meaning of feature e) of claim 1, which reads:

e) acquiring (S7) imaging parameter data describing at least one imaging parameter for generating, from the image-based model, an image of the anatomical

structure in dependence on the medical indication data;

- 3.3.1 The examining division was of the view that the method of D1 used a disease code or case information to retrieve imaging parameter data in the form of a presentation sequence (see the analysis for feature e) in point 2.1 of the decision under appeal).
- 3.3.2 Feature e) specifies only the purpose of the imaging parameter, i.e. to generate an image of the anatomical structure in dependence on the medical indication data. In D1, the presentation sequence is selected on the basis of the disease code and is used for generating, from the patient data imagery and the anatomic atlas, an image of an anatomical structure in the patient data imagery (see point 3.2 above). Thus, feature e) is anticipated by the disclosure of D1.
- 3.4 The appellant also argued that document D1 did not disclose the characterising portion of claim 1, i.e. an imaging parameter defining a perspective onto the image-based model of the anatomical structure (see the first, second and fourth paragraphs in section 1.2 of the statement of grounds of appeal).
 - 3.4.1 In the examining division's opinion, a presentation sequence necessarily involved the definition of a presentation perspective, i.e. of imaging parameters such as a viewpoint and a direction of view (see point 6.1 of the decision under appeal).
 - 3.4.2 In D1, a presentation sequence "*determines what information to show to the patient in what manner*" (see the first paragraph in the right-hand column on page 215). D1 exemplifies presentation sequences as "a

semi-transparent bone surface of the patient's hip joint, extracted from the patient's CT volume and a highlighted area of cartilage defect", "a surface and isolevel reconstruction of muscle and bone tissue or x-ray views using e.g. maximum intensity projection" or "skin ... displayed semi-transparent and permit[ting] a view into the body revealing the bone surface" (see the last paragraph in the left-hand column on page 215, section 2.3, the second paragraph in the right-hand column on page 216, and section 3, the second paragraph in the left-hand column on page 217).

On the basis of these examples, a presentation sequence defines instructions for selecting and compositing anatomical structures from the patient data imagery and the anatomic atlas. However, there is no indication that a perspective for the presentation sequence is defined at the compositing stage.

- 3.4.3 In addition, the presentation sequence is intended to be displayed in a three-dimensional (3D) virtual world in which the patient can navigate (see D1, abstract and section 3, first paragraph on page 217). The position of the user in the 3D virtual world determines the perspective of a patient's anatomical structure.

The freedom in selecting a viewpoint while navigating a virtual world is at odds with selecting a predefined presentation perspective.

- 3.4.4 In view of points 3.4.1 to 3.4.3 above, the board shares the appellant's view that D1 does not directly and unambiguously disclose an imaging parameter defining a perspective onto the image-based model of the anatomical structure.

3.5 The appellant also submitted that, in contrast to D1, claim 1 specified using the atlas as a reference system for defining suitable views (see the third paragraph in section 1.2 of the statement of grounds of appeal).

It appears to be undisputed that document D1 does not disclose the coordinate systems involved in the registration and the visualisation of the presentation sequence (see point 3.2 of the decision under appeal). However, the imaging parameter of claim 1 specifies a perspective onto the image-based model part of the atlas data. Thus, the board agrees with the appellant that D1 does not disclose using the atlas as a reference system for defining suitable views.

3.6 As a consequence, the examining division's conclusion that the subject-matter of claim 1 lacked novelty in view of the disclosure of document D1 was incorrect.

4. *Main request - inventive step (Article 56 EPC)*

4.1 An invention is to be considered to involve an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art (Article 56 EPC).

4.2 According to case law of the boards of appeal of the EPO, generally, any aspects that are based on personal preferences of the user are non-technical in nature (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition, 2022, "Case Law", I.D.9.2.10 d), in particular cited decision T 478/06, Reasons 6).

Similarly, where a GUI design aims exclusively at the mental activities of a viewer, in particular at

preparing the relevant data for a non-technical decision-making process by the user as the final addressee, no technical contribution can be acknowledged beyond its mere implementation (see Case Law, I.D.9.2.10 d)).

4.3 In view of section 3. above, the method of claim 1 of the main request differs from the disclosure of document D1 in that:

- the imaging parameter defines a perspective onto the image-based model of the anatomical structure

4.4 As acknowledged in the application as filed, the imaging parameter describes a desired perspective from which a user wishes to view the anatomical structure, e.g. to visually assess the anatomical structure or to plan a medical procedure (see page 1, lines 14, 15 and 19 to 24 and page 7, lines 24 to 26). The perspective depends on the medical indication, i.e. a pathological state of the anatomical structure (see page 5, lines 17 to 19 and page 6, lines 26 to 29). The perspective may be a commonly used view for judging specific types of fractures or for a given stage of the medical procedure, or it may be a user-specific view (see page 1, lines 15 to 17 and page 10, lines 2 to 5). A physician may be interested in a different view of the anatomical structure than a medical technician would be (see page 10, lines 5 and 6). Thus, some medical professionals may have a personal preference for a view corresponding to a standard perspective while others do not. A user selecting a perspective they are familiar with may help them to, for example, assess the patient's anatomical structure more efficiently or plan a medical procedure.

The effect of the distinguishing feature is that the anatomical structure for a specific pathological state is displayed from a perspective which satisfies a user's personal preferences. In other words, the same information as in D1 is displayed from a different perspective. Technical aspects only come into play with the technical implementation of this non-technical idea.

- 4.5 Under the so-called COMVIK approach, the objective technical problem may have to be formulated by including the non-technical aspects, whether novel or not, as part of the framework of the technical problem to be solved, in particular as a constraint that has to be met. In other words, the person skilled in the art is given the non-technical aspects, i.e. a specification of what is desired for non-technical reasons, and is tasked with finding a technical solution corresponding to that specification (see Case Law, I.D.9.2.6, in particular cited decision T 641/00, Reasons 5 et seq.).
- 4.6 The objective technical problem may be formulated as how to provide a perspective of an anatomical structure in a specific pathological state according to a user's visualisation preferences.
- 4.7 Faced with the objective technical problem, the person skilled in the art would have adapted the free viewpoint of a patient's anatomical structure in the 3D virtual world of document D1 to a user's preferred perspective for a pathological state as described by the disease code. In doing so, the person skilled in the art would have had to associate a preferred perspective with a disease code and identify and render

the perspective for that disease code either automatically or on demand. These are straightforward modifications for the skilled practitioner.

- 4.7.1 To define the preferred perspective, the person skilled in the art would have to select a reference system. The board agrees with the examining division that choosing a reference system in which at least one type of data is already defined is an obvious option to reduce the number of computations (see point 3.4 of the decision under appeal).
- 4.7.2 In this case, using the common anatomic atlas coordinate system as the reference system, the perspectives for different disease codes/case information may be defined and stored in the same reference system for a plurality of patients. Thus, it is the most evident option.
- 4.7.3 The board notes, however, that to demonstrate the obviousness of a solution chosen from various possibilities, it is sufficient that the one chosen is obvious and it is not necessarily relevant that there are several other possible solutions (see Case Law, I.D.9.21.9 b)). Therefore, in view of point 4.7.1 above, defining the perspective onto the coordinate system of either the patient data imagery or the anatomical atlas does not involve an inventive step.
- 4.8 According to the appellant, the computer - not the user - applied a standard perspective that was objectively the most useful one from a scientific point of view in consideration of the medical indication. This was completely different from considering a user's personal preference since the standard perspective was the same for all potential users (see the third paragraph in

section I. of the appellant's letter dated 15 December 2023).

The technical effect achieved by the distinguishing feature was that the patient image could be displayed in a manner suitable for planning a medical procedure in dependence on the given medical indication (see the first paragraph in section 1.3 of the statement of grounds of appeal).

- 4.8.1 The board is not convinced that this effect is achieved as claim 1 does not specify any characteristics of the perspective, and in particular the claim is not limited to standard or objective perspectives. Moreover, the application clearly considers user-specific views (see point 4.4, first paragraph above). Thus, the claimed perspective's suitability for planning any medical procedure cannot be assessed.
- 4.8.2 For the sake of argument, assuming that the alleged effect was achieved, the objective technical problem could be formulated as how to achieve said effect, i.e. how to display the patient image in a manner suitable for planning a medical procedure for a given medical indication.

In the board's view, the person skilled in the art would, in an obvious manner, have considered presenting commonly used views for corresponding medical indications and implemented the necessary changes in the system of D1 to display them, as discussed in point 4.7 above.

- 4.9 The appellant also argued that the subject-matter of claim 1 of the main request improved human-machine interaction by predefining the best view (see the third

paragraph in section I. of the appellant's letter dated 15 December 2023).

4.9.1 Under the case law of the boards of appeal, a feature defining a presentation of information produces a technical effect if it credibly assists the user in performing a technical task by means of a continued and/or guided human-machine interaction process (see Case Law, I.D.9.2.10 b)).

4.9.2 However, the board cannot identify any human-machine interaction process designed to assist a user in performing a technical task in the subject-matter of claim 1. Consequently, the effect identified in point 4.4 above need not be modified.

4.10 The appellant further submitted that, in view of the paragraph bridging pages 12 and 13 of the description, the invention at issue avoided having to generate, for example, a scout CT scan of the anatomical structure, thereby reducing the imaging radiation dose applied to the patient and improving the speed of imaging the patient (see the third paragraph in section I. of the appellant's letter dated 15 December 2023).

The cited passage of the description appears to use the imaging parameter for controlling a medical imaging device to acquire image data of an anatomical structure. However, claim 1 does not define any features relating to imaging an anatomical structure by controlling a medical imaging device, let alone using the imaging parameter for that purpose. Thus, the appellant's alleged effect is not based on the distinguishing features of claim 1 over the closest

prior art document D1, so it does not need to be considered.

- 4.11 The appellant also contested the obviousness of the solution to the objective technical problem. The large number of steps needed to arrive at the solution proved that the invention defined by claim 1 would not have been obvious to the person skilled in the art. In particular, the state of the art would not have prompted the person skilled in the art to define the perspective relative to the atlas data (see the last paragraph in section I. of the appellant's letter dated 15 December 2023).

In the board's view, selecting the coordinate system of either the anatomic atlas or the patient imagery would have been obvious choices available to the person skilled in the art for the reasons set out in point 4.7.1 to 4.7.3 above.

- 4.12 In view of the above, the subject-matter of claim 1 of the main request lacks inventive step over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).

5. *First auxiliary request - inventive step (Article 56 EPC)*

- 5.1 With respect to claim 1 of the main request, claim 1 of the first auxiliary request further specifies that:

- (i) the imaging parameter data contains positional information which is defined in a coordinate system used for defining the image-based model

- (ii) the indication image data is determined by transforming, by applying the transformation to the imaging parameter data, the positional information contained in the imaging parameter data into a coordinate system defining positions in the patient medical image data

These features specify implementation details and constitute further distinguishing features over the disclosure of document D1. However, they do not affect the definition of the effect or the objective technical problem set out for claim 1 of the main request.

- 5.2 A perspective requires positional information (e.g. viewing point, direction). Thus, defining the positional information in the image-based model coordinate system (feature (i)) is already implied in the assessment of inventive step of claim 1 of the main request (see point 4.7 above).
- 5.3 The board interprets distinguishing feature (ii) as follows: the coordinate system of the patient's medical image data is the coordinate system onto which the patient's medical image data, the image-based model and the positional information are aligned using atlas-patient transformation data.
 - 5.3.1 The method of document D1 registers the patient data imagery and the anatomic atlas (see point 3.2 above). It does not disclose the coordinate system used for the registered data.
 - 5.3.2 Thus, the person skilled in the art is again confronted with the task of selecting a coordinate system. As set out in point 4.7.1 above, the coordinate systems of either the patient data imagery or the anatomic atlas

are obvious choices for the person skilled in the art to reduce the number of computations.

5.3.3 Moreover, the board shares the examining division's opinion that the patient data is preferably not to be transformed, in order to minimise the flaw to the patient information present in it. The coordinate system of the patient data imagery would have been the most obvious choice (see point 3.5 of the decision under appeal). In any case, the mere selection of one amongst a number of different obvious solutions does not render the selected one inventive (see point 4.7.3 above).

5.4 According to the appellant, using the atlas coordinate system to define the positional information contained in the perspective reduced the number of computational steps to be taken to appropriately display the patient-specific medical image (see the first paragraph in section II. of the appellant's letter dated 15 December 2023).

The board considered this aspect with respect to the main request and arrived at the conclusion that defining the perspective onto the coordinate system of the anatomical atlas did not involve an inventive step (see points 4.7.1 to 4.7.3 above).

5.5 In view of the above, the subject-matter of claim 1 of the first auxiliary request lacks inventive step over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).

6. *Second auxiliary request - inventive step (Article 56 EPC)*

6.1 The subject-matter of claim 1 of the second auxiliary request further specifies, with respect to claim 1 of the first auxiliary request, that:

(iii) the atlas-patient transformation data is determined by applying a fusion algorithm to the atlas data and the patient medical image data, wherein the image-based model is fused to the patient-specific medical image

6.2 In point 4.2 of the decision under appeal, the examining division interpreted the fusion algorithm as visualising superimposed images after their registration.

However, claim 1 clearly specifies the fusion algorithm for determining the atlas-patient transformation data. Thus, the fusion algorithm is part of the registration process and separate from image visualisation.

6.3 The board shares the appellant's view that document D1 does not describe any specific mode of registering the atlas with the patient image (see section 3.2 of the statement of grounds of appeal).

6.4 However, the board is not convinced that applying a fusion algorithm provided a more reliable registration and thus also a more reliable computation of the desired perspective (see section 3.3 of the statement of grounds of appeal). The reasons are as follows.

6.4.1 For the purpose of assessing inventive step, the board in this case follows the principle whereby the

description and drawings may be used to interpret the claims and identify their subject-matter, in particular in order to judge whether it is novel and not obvious (see Case Law, II.A.6.3.1). The technical effect which may be attributed to the "fusion algorithm" will be ascertained on the basis of this interpretation.

6.4.2 According to the description, a fusion algorithm matched the image-based model onto the patient-specific medical image (see page 4, line 33 to page 5, line 4 of the description). Thus, a fusion algorithm defines, in general terms, the image registration concept of D1.

6.4.3 Therefore, the technical contribution of the term fusion algorithm is no different from that of image registration. Amended feature (iii) does not affect the assessment of inventive step for claim 1 of the first auxiliary request, which also applies to claim 1 of the second auxiliary request.

6.5 In view of the above, the subject-matter of claim 1 of the second auxiliary request lacks inventive step over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).

7. *Third to fifth auxiliary requests - inventive step (Article 56 EPC)*

7.1 The subject-matter of the claims of the third to fifth auxiliary requests corresponds to that of the claims of the main request and the first and second auxiliary requests without the editorial amendments (see point IV. above).

In point 2.2 above, the board indicated that the editorial amendments did not change the substance of the proceedings. It follows that the objections against the patentability of the main request and the first and second auxiliary requests equally apply to the third to fifth auxiliary requests, respectively.

- 7.2 In view of the above, the subject-matter of claim 1 of each of the third to fifth auxiliary requests lacks inventive step over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art (Article 56 EPC).
8. *Sixth to eleventh auxiliary requests - admittance (Article 13(2) RPBA 2020)*
- 8.1 Claim 1 of the sixth to eleventh auxiliary requests has been amended to include features relating to the generation and acquisition of patient medical image data on the basis of the imaging parameter. The appellant filed the claims of the sixth to eleventh auxiliary requests by letter dated 15 December 2023, i.e. after notification of the summons to oral proceedings, so these requests are amendments within the meaning of Article 13(2) RPBA 2020 (version applicable at the time these requests were filed).
- 8.2 Under Article 13(2) RPBA 2020, any amendment to a party's appeal case after notification of a summons to oral proceedings is, in principle, not to be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

The explanatory remarks on Article 13(2) RPBA 2020 contain the following guidance: "*The basic principle of*

the third level of the convergent approach is that, at this stage of the appeal proceedings, amendments to a party's appeal case are not to be taken into consideration. However, a limited exception is provided for: it requires a party to present compelling reasons which justify clearly why the circumstances leading to the amendment are indeed exceptional in the particular appeal ('cogent reasons'). For example, if a party submits that the Board raised an objection for the first time in a communication, it must explain precisely why this objection is new and does not fall under objections previously raised by the Board or a party. The Board may decide to admit the amendment in the exercise of its discretion" (see Supplementary publication 2, OJ EPO 2020, explanatory remarks on Article 13(2), page 60, third paragraph).

- 8.3 According to the appellant, the claims according to the sixth to eleventh auxiliary requests were submitted as a response to the inventive step objections raised in the board's communication, in particular the objection concerning the claims of the main request, which had not been a topic of discussion during the procedure before the examining division (see section X. of the appellant's letter dated 15 December 2023). During the oral proceedings, the appellant further submitted that it should be allowed to react to the inventive step objection raised for the first time in the board's communication. In particular, the board's preliminary view that the claimed perspective could be subject to user preferences constituted exceptional circumstances.
- 8.4 The board does not admit any of the sixth to eleventh auxiliary requests for the following reasons.

8.4.1 First, the board finds that the change from the examining division's novelty objection to the board's objection of lack of inventive step is a natural development of the case which is not to be considered exceptional within the meaning of Article 13(2) RPBA 2020.

(a) During the first-instance proceedings, the appellant had argued that document D1 did not disclose a predefined perspective for each disease to show patient images (see for instance the fifth paragraph on page 1 of the minutes of the oral proceedings).

However, in the decision under appeal, the examining division disagreed and held that the subject-matter of claim 1 of the then-pending main request lacked novelty over document D1.

(b) In the statement of grounds of appeal, the appellant contested, among other things, the examining division's conclusion that the closest prior art document D1 disclosed that the imaging parameter defined a perspective onto the image-based model of the anatomical structure (see points 3.4 and 3.5 above). It further argued in favour of inventive step on the basis of that feature.

It thus appears that the appellant anticipated the possibility that the examining division's novelty objection against claim 1 of the then-pending main request might evolve into an inventive step objection as part of the normal development of the case.

(c) In its communication under Article 15(1) RPBA 2020, the board concurred with the appellant's view that document D1 did not disclose the claimed perspective, thus concluding that the subject-matter of claim 1 of the main request in hand was new over the disclosure of document D1.

However, the board countered the appellant's assessment of inventive step on the basis of substantially the same passages and teachings relied upon by the examining division for substantiating its objection for lack of novelty. Thus, the board relied on substantially the same facts and evidence as the examining division but merely arrived at a different legal conclusion.

(d) In the case in hand, the board finds that this normal development of a case, based on substantially the same factual and evidentiary framework, does not constitute exceptional circumstances within the meaning of Article 13(2) RPBA 2020 that would justify the admittance of any of the sixth to eleventh auxiliary requests.

8.4.2 Moreover, the board's agreement with one of the appellant's arguments (for instance, regarding distinguishing features) cannot be considered "exceptional circumstances". If exceptional circumstances were to be acknowledged when a board agrees with an argument raised by the appellant, the board would be unable to agree with the appellant without opening the door to the filing of new requests.

8.4.3 Furthermore, the board is not persuaded that its preliminary view that the claimed perspective could be

subjective to user preferences constituted exceptional circumstances.

8.4.4 The application discloses that different users may be interested in different perspectives (see point 4.4 above). In its communication, the board interpreted the claimed perspective accordingly. The board fails to see why interpreting the claimed perspective according to the literal disclosure of the application could constitute exceptional circumstances.

8.4.5 Lastly, the board finds that there are no cogent reasons within the meaning of Article 13(2) RPBA 2020 for not filing the auxiliary requests until this late stage of the proceedings.

(a) During the oral proceedings before the department of first instance it became evident that the examining division had found the subject-matter of claim 1 of the then-pending main request to lack novelty (see the eighth paragraph on page 1 of the minutes).

(b) The board is of the opinion that if the appellant had considered that the combination of features of the claims of the sixth to eleventh auxiliary requests in hand contributed to novelty and inventive step, it should have filed one or more auxiliary requests with such claims as a fallback position during the first-instance proceedings and sought a decision from the examining division on those claims. This is all the truer since the features added to claim 1 of the auxiliary requests at issue are directed to controlling a medical imaging device to improve, in particular more efficiently and more reliably, repeated imaging of

the anatomical structure using the perspective. This new subject-matter shifts the claimed invention in a different direction compared with claim 1 of the requests filed during the first-instance proceedings.

8.5 In view of the above, the board, exercising its discretion under Article 13(2) RPBA 2020, does not admit any of the sixth to eleventh auxiliary requests into the appeal proceedings.

9. Conclusion

9.1 The main request and first to fifth auxiliary requests are not allowable because claim 1 of each of these requests does not meet the requirements of Article 56 EPC. The sixth to eleventh auxiliary requests are not admitted into the appeal proceedings. Since none of the appellant's requests is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Boelicke

B. Willems

Decision electronically authenticated