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Datasheet for the decision of 25 March 2026

Case Number: T 0847/24 - 3.2.02

Application Number: 13818995.6

Publication Number: 2931143

IPC: A61B17/15, A61B17/17, A61B17/80, A61F2/30

Language of the proceedings: EN

Title of invention:
IMPLANT AND GUIDE FOR MAXILLOFACIAL SURGERY

Patent Proprietor:
Materialise NV

Opponent:
Lorenz Seidler Gossel
Rechtsanwälte Patentanwälte Partnerschaft mbB

Relevant legal provisions:
EPC Art. 54, 56, 64(2), 69(1), 123(3)
EPC Prot. Interpretation Article 69
RPBA 2020 Art. 12(4)

Keyword:
Inventive step - non-technical distinguishing feature - main request and auxiliary requests 2 to 4 (no)
Extent of protection - protection conferred by Article 64(2) EPC - extension of protection conferred - auxiliary request 1 (yes)

Decisions cited:
G 0002/88, G 0001/04, G 0003/14, G 0001/16, G 0001/19, G 0001/24, T 0867/05, T 0547/08, T 1635/09, T 1791/16, T 0970/17, T 0312/19, T 1473/19, T 0367/20, T 0177/22, T 0439/22, T 1345/23, T 0837/24

Decisions of the Unified Patent Court and the German Federal Court of Justice cited:
Order of the Court of Appeal of the Unified Patent Court in NanoString Technologies v. 10x Genomics, UPC_CoA_335/2023 of 26 February 2024, as rectified by the order of 11 March 2024
Order of the Court of Appeal of the Unified Patent Court in Abbott v. Sinocare, UPC_CoA_901/2025, UPC_CoA_901/2025 of 17 April 2026
Decision of the German Federal Court of Justice, MPEG-2-Videosignalcodierung, X ZR 33/10 of 21 August 2012

Catchword:
If a granted claim defines a computer-implemented method for configuring a physical object which, when carried out, merely results in data representing that physical object, and not in the object itself, amending the claim such that it additionally includes the step of manufacturing the physical object so configured is, in view of Article 64(2) EPC, not allowable under Article 123(3) EPC (Reasons 6).

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Case Number: T 0847/24 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 25 March 2026

Appellant: (Patent Proprietor)	Materialise NV Technologielaan 15 3001 Leuven (BE)
Representative:	De Clercq & Partners Edgard Gevaertdreef 10a 9830 Sint-Martens-Latem (BE)
Respondent: (Opponent)	Lorenz Seidler Gossel Rechtsanwälte Patentanwälte Partnerschaft mbB Widenmayerstrasse 23 80538 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted/electronically transmitted on 24 April 2024 revoking European patent No. 2931143 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	S. Dennler
	N. Obrovski

Summary of Facts and Submissions

I. This appeal was filed by the patent proprietor against the opposition division's decision to revoke the patent at issue.

The revocation was based, *inter alia*, on the grounds that claim 1 of the requests then on file contained added subject-matter, contrary to Article 123(2) EPC; extended the scope of protection conferred by the patent as granted, contrary to Article 123(3) EPC; lacked novelty in view of D2; or lacked inventive step starting from D2 because the distinguishing features lacked technical character. D2 is the following document:

D2 S. Bai *et al.*,"*Computer-Aided Design and Computer-Aided Manufacturing Locating Guides Accompanied With Prebent Titanium Plates in Orthognatic Surgery*", Journal of Oral and Maxillofacial Surgery 70, 2012, 2419-26

II. The **appellant (patent proprietor)** requested that the decision be set aside and that the patent be maintained in amended form on the basis of one of the main request and auxiliary requests 1 to 4 filed with the statement of grounds of appeal.

The **respondent (opponent)** requested that the appeal be dismissed.

III. Oral proceedings before the Board were held on 25 March 2024, at the end of which the present decision was announced.

IV. Claim 1 of the **main request** reads as follows (with feature numbering based on that used in the decision under appeal):

1.1 "*A computer-implemented method for configuring a surgical guide (9, 28, 34, 44) and an associated implant (5, 27, 33, 43) for maxillofacial osteosynthesis, the method comprising:*

1.2 *accessing data indicative of a pre-operative maxillofacial anatomy of a patient and generating a three-dimensional model (40) of said anatomy using said data;*

1.3 *simulating an osteotomy (3, 7, 12, 13, 22, 29) on the three-dimensional model of the pre-operative maxillofacial anatomy, said simulated osteotomy defining at least one cut that results in a second bone portion (2, 25, 31) that is separated from a first bone portion (1, 24, 30), said osteotomy resulting in an absence of any bone coupling the first and second bone portions together;*

1.4 *arranging the second bone portion in relation to the first bone portion to generate a modified three-dimensional model (50) indicative of a desired post-operative orientation of the first and second bone portions, said arrangement comprising at least one of a translation and a rotation of the second bone portion in relation to the first bone portion;*

1.5 *defining, on the modified three-dimensional model, a first plurality of attachment points (4, 32) for the implant on the first bone portion and a second plurality of attachment points (4, 32) for the implant on the second bone portion,*

1.5.1 *wherein said first and second pluralities of attachment points are defined on the modified three-dimensional model based on at least one location of one or more anatomical features (51, 53) of the patient;*

1.6 *determining a monolithic three-dimensional structure for the implant that couples the first and second plurality of attachment points in the modified three-dimensional model, wherein the monolithic three-dimensional structure for the implant has a shape that varies in each of three dimensions to arrange the second bone portion relative to the first bone portion in accordance with the desired post-operative orientation, each of at least one of the attachment points corresponding to an aperture for a bone fixation device (6) in said structure for the implant;*

1.7 *mapping the first and second plurality of attachment points to corresponding locations on the three-dimensional model of the pre-operative maxillofacial anatomy; and*

1.8 *determining a monolithic three-dimensional structure for the surgical guide that couples the corresponding locations in the three-dimensional model of the preoperative*

maxillofacial anatomy, wherein each of at least one of the corresponding locations corresponds to a guide aperture (35) in said structure for the surgical guide

1.9 *wherein the first and second plurality of attachment points are defined on the modified three-dimensional model such that at least a spacing distance between a first set of adjacent attachment points is different from a spacing distance between a second set of adjacent attachment points,*

wherein the first and second sets of adjacent attachment points comprise:

two sets of attachment points with each set comprising adjacent attachment points on the same bone portion, or

two sets of attachment points with each set comprising a first attachment point on the first bone portion and a second, adjacent attachment point on the second bone portion."

V. Claim 1 of **auxiliary request 1** differs from claim 1 of the main request in that a semicolon has been appended to feature 1.8, and feature 1.1 has been amended as follows (amendments highlighted by the Board):

1.1 "*A ~~computer-implemented~~ method for configuring and producing a surgical guide (9, 28, 34, 44) and an associated implant (5, 27, 33, 43) for maxillofacial osteosynthesis, the method comprising:*

and in that the following wording is added to the end of claim 1: "*[...] second bone portion; and producing the surgical guide and the implant.*"

VI. Claim 1 of **auxiliary request 2** differs from claim 1 of the main request in that the term "*computer-implemented*" in feature 1.1 has been deleted, a semicolon has been appended to feature 1.8 and feature 1.2 has been amended as follows:

1.2 "*accessing radiographic or tomodensimetric data indicative of a pre-operative maxillofacial anatomy of a patient and processing said data on a computer to generate ~~generating~~ a three-dimensional model (40) of said anatomy using said data;*"

VII. Claim 1 of **auxiliary request 3** differs from claim 1 of auxiliary request 2 in that the wording "*following the defining of the attachment points,*" has been added to the beginning of feature 1.6.

VIII. Claim 1 of **auxiliary request 4** differs from claim 1 of auxiliary request 3 in that the term "*virtual*" has been added before each occurrence of the expression "*three-dimensional model*" and in that features 1.6 and 1.8 have been amended to read "*determining in a virtual three-dimensional space a monolithic three-dimensional structure*".

IX. The **appellant's arguments**, where relevant to the present decision, can be summarised as follows.

Admittance of the main request and auxiliary request 4

Although newly filed on appeal, the main request and auxiliary request 4 should be admitted. The amendments made in these requests had been discussed in the opposition proceedings, did not raise any new issue and streamlined the discussion on appeal.

Main request

Claim interpretation

As set out in the statement of grounds of appeal, the three-dimensional (3D) models referred to in claim 1 were virtual computer models, and all steps of the computer-implemented method defined in the claim were carried out virtually on a computer. This was the only claim interpretation to be taken into account in the assessment.

Novelty in view of D2

The subject-matter of claim 1 of the main request was novel in view of D2. D2 did not disclose at least features 1.4 to 1.9.

Although D2 started from a pre-operative computer model and involved a virtual osteotomy, the subsequent steps relied on a modified 3D model constituted by a physical resin model and not a virtual model as required by feature 1.4. Furthermore, the titanium plates were bent manually on that physical resin model, and the screw-hole locations were then marked on it. The attachment points were therefore not defined on a modified 3D computer model, nor were the attachment points defined based on anatomical features of the patient, as required by features 1.5 and 1.5.1. Rather, the attachment points were dictated by the pre-existing

holes of standard titanium plates and not defined as required by feature 1.9. The fixed geometry of the titanium plates constrained the possible screw positions and prevented a free definition of patient-specific attachment points.

D2 also did not disclose the determination of a monolithic 3D implant structure coupling the attachment points in the modified 3D model, as required by feature 1.6. In contrast, the titanium plates used in D2 were pre-existing physical plates, manually bent on the physical resin model. They were not computationally generated from previously defined attachment points. The sequence of steps in D2 differed from that defined in claim 1. In D2, the plate geometry and its manual bending determined where the screw holes, and thus the attachment points, were to be located, in contrast to the claimed method in which the attachment points were defined first and the implant structure was then determined to couple them in the modified 3D model.

The mapping and determining steps of features 1.7 and 1.8 were also both performed on and between the pre- and post-operative computer models, which was not disclosed in D2.

Inventive step starting from D2

The subject-matter of claim 1 of the main request involved an inventive step starting from D2.

Although non-technical in isolation, feature 1.6 contributed to the technical character of the method of claim 1. The claimed method was explicitly limited to a technical application, namely the configuration of a tailor-made implant for maxillofacial osteosynthesis.

The method started from data indicative of a pre-operative maxillofacial anatomy of a real, existing patient and resulted in the configuration of the final physical state of an existing real object used in a real technical setting, namely an implant customised to that patient. Feature 1.6 therefore directly impacted the technical outcome of the claimed method and was therefore to be taken into consideration for assessing inventive step.

Feature 1.6 was advantageous in that it allowed the attachment points of the implant to be defined first and only then a customised 3D structure for the implant, adapted to these attachment points, to be designed. As described in paragraph [0037] of the patent at issue, this allowed the bone fixation devices used to fix the implant to be placed in the most favourable locations of the anatomy, for example with a reduced risk of damaging any important anatomical structure and in regions with the best bone quality. Feature 1.6 thus contributed to the technical effect of configuring a tailor-made implant for a more accurate and safer maxillofacial osteosynthesis procedure.

The examples relied on by the respondent and the opposition division in the decision under appeal as allegedly non-technical uses did not undermine the technical character of the claimed method. Evaluating the generated optimal shape against existing products involved a technical analysis of fit, functionality and performance. Assessing the feasibility of osteosynthesis involved anatomical measurements, structural analysis and biomechanical considerations. Even a cost evaluation was linked to technical parameters such as materials, manufacturing complexity and design constraints. These uses were therefore not

purely business or cognitive considerations but remained connected to technical effects in medical treatment planning.

Starting from D2, the objective technical problem was to enable the configuration of a tailor-made implant for a more accurate and safer maxillofacial osteosynthesis procedure. D2 did not render this solution obvious. Its approach was based on manually bending pre-existing titanium plates on a physical resin model and only then marking the attachment points. D2 was therefore constrained by the geometry of the available plates and did not suggest first selecting safe, patient-specific attachment points and subsequently designing a monolithic implant to couple them. Nor did the cited further prior art provide this sequence without hindsight.

Auxiliary request 1 - extension of scope of protection

The addition of a production step in the method of claim 1 of auxiliary request 1 did not extend the protection conferred by claim 1 as granted. The requirement of Article 123(3) EPC was therefore met.

This was because this additional step merely limited the method of claim 1 as granted. Such a limited method was already encompassed by claim 1 as granted by virtue of the term "*comprising*" in the preamble, which did not restrict the steps to those listed in the claim. This interpretation aligned with earlier decisions, such as T 970/17, T 867/05 and T 547/08, where the deciding Boards had found that an amendment which added additional features to a granted claim, thereby narrowing its scope, did not violate Article 123(3) EPC.

Furthermore, the product protection conferred by Article 64(2) EPC already extended to a physical implant produced through claim 1 as granted. This was also supported by the patent specification, which had to be used to interpret the claims and thus to determine the extent of protection conferred by the patent, pursuant to Article 69(1) EPC, and which confirmed that the claimed method could involve a further production step. This interpretation was consistent with the purpose of Article 123(3) EPC. Excluding from the protection conferred by claim 1 as granted the physical implant produced as configured in accordance with the method defined in that claim would undermine the commercial utility of claim 1 as granted, contrary to the fundamental objectives of the patent system. A third party designing and producing an implant according to claim 1 of auxiliary request 1 would indeed already have infringed claim 1 as granted, and the amendment therefore did not put third parties in a worse position.

Auxiliary requests 2 to 4 - inventive step starting from D2

The subject-matter of claim 1 of each of auxiliary requests 2 to 4 involved an inventive step starting from D2 at least for the same reasons as claim 1 of the main request.

X. The **respondent's arguments**, where relevant to the present decision, can be summarised as follows.

Admittance of the main request and auxiliary request 4

The main request and auxiliary request 4 should not be admitted. These requests could and should have been filed in the opposition proceedings. In line with T 312/19, it was irrelevant that the limitations included in the main request had been included separately in requests filed in the opposition proceedings. Furthermore, auxiliary request 4 was not properly substantiated since the appellant had failed to provide reasons why the added subject-matter objection to auxiliary request 16 underlying the decision, on the basis of which the opposition division had not admitted that request (see Reasons 20.3 and 20.4) and which likewise applied to auxiliary request 4, was unconvincing.

Main request

Claim interpretation

The appellant's arguments concerning the interpretation of claim 1, according to which the modified 3D model was necessarily a virtual computer model and all the actions performed on that model, such as the definition of the attachment points, were performed virtually on a computer, had been presented for the first time on appeal and should therefore not be admitted. In any event, these arguments were unconvincing. The claim language also encompassed implementations in which the method steps were performed as purely mental acts or as actions performed on a physical model.

Claim 1 allowed for multiple technically reasonable interpretations, all of which had to be taken into account when assessing it.

Novelty in view of D2

The subject-matter of claim 1 of the main request was not novel in view of D2.

D2 disclosed features 1.4 to 1.6 and 1.9, as the Board had set out in its communication under Article 15(1) RPBA. In D2, the rearrangement of the bone portions was likewise performed virtually on a computer before generating a modified 3D model on which the attachment points were defined by producing a physical resin model based on that simulation. Moreover, bending the titanium plates into shape on the resin model amounted to determining their final 3D structure. This shaping implicitly required that the user had first selected an appropriate location of the plates on the modified 3D model and then defined the attachment points based on a preliminary shape of the final implant before the titanium plates were actually bent. It followed that D2 disclosed feature 1.6.

Inventive step starting from D2

Even if feature 1.6 were to be considered novel over D2, it could not, in any event, render the subject-matter of claim 1 of the main request inventive starting from that document.

Feature 1.6, which was non-technical in isolation, did not contribute to the technical character of the claimed method and consequently could not support the existence of an inventive step in accordance with G 1/19. The method of claim 1 of the main request merely produced data defining a 3D implant structure but did not require the implant to be manufactured. This data was not specifically adapted for a manufacturing apparatus, and the claim did not specify,

even implicitly, any technical use of it. The data could be used for non-technical purposes, for example to gain scientific knowledge, compare possible implant designs or assess the feasibility of osteosynthesis or the associated costs, i.e. for purely cognitive exercises. Furthermore, the case at issue was not one of indirect measurement of a physical object as in G 1/19, Reasons 99.

Auxiliary request 1 - extension of scope of protection

The amendment extended the protection conferred by the patent as granted, contrary to Article 123(3) EPC.

Claim 1 of auxiliary request 1 included a production step and thereby gave rise, under Article 64(2) EPC, to protection for the physical implant directly obtained by the method.

However, the granted patent did not confer such product protection for a physical implant manufactured in accordance with the 3D structure configured by the method of claim 1 as granted. Article 64(2) EPC concerned products directly obtained by the process as claimed, not products that could be obtained only after carrying out further unclaimed steps. The method of claim 1 as granted ended with the determination of a 3D structure for the implant but did not directly produce a physical implant. Even if a method including an additional production step could fall within the scope of claim 1 as granted, the product resulting from that additional step was not thereby directly obtained by the granted method itself.

Auxiliary requests 3 to 4 - inventive step starting from D2

The subject-matter of claim 1 of each of auxiliary requests 2 to 4 lacked inventive step starting from D2 for similar reasons as discussed for claim 1 of the main request. The additional limitations added in these requests were also disclosed in D2.

Reasons for the Decision

1. Subject-matter of the patent in suit

1.1 The contested patent relates to a method for configuring a surgical guide and an associated implant for maxillofacial osteosynthesis, both customised to a patient, as defined in claim 1. Such a surgical guide and implant can be used to correct bone deformities of a patient's face (see paragraphs [0002] to [0010]).

The method is described in general terms in paragraphs [0014] to [0027]. Several exemplary embodiments are disclosed in paragraphs [0028] to [0072] with reference to Figures 1 to 9, in paragraphs [0073] to [0080] with reference to Figures 20 to 25 and in paragraphs [0081] to [0089] with reference to Figures 26 to 31.

1.2 In essence, the method comprises generating a pre-operative three-dimensional (3D) model (40) of the patient's maxillofacial anatomy (see Figure 1, reproduced below), simulating an osteotomy (7) on that model and repositioning the resulting bone portions (1, 2) to their desired positions to generate a modified 3D model (50) representing the desired post-operative configuration (see Figure 3, reproduced below).

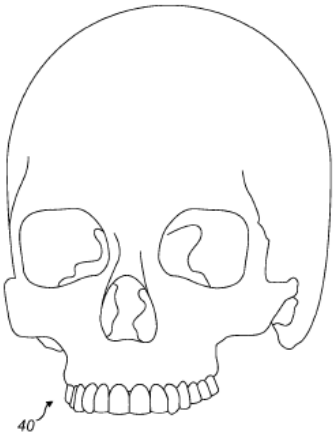

FIG. 1

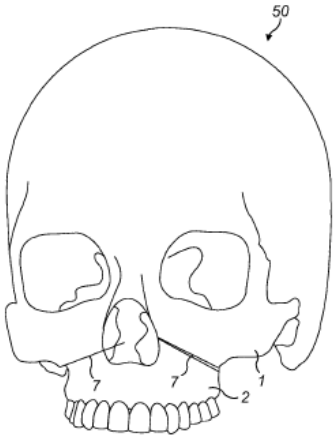

FIG. 3

The method further comprises defining, on the modified post-operative model (50), a plurality of attachment points based on at least one location of one or more anatomical features of the patient, each of these attachment points corresponding to an aperture in the implant for a bone fixation device (6), such as a bone screw (see Figure 9, reproduced below). The method then comprises determining a 3D structure for the implant (5) that couples these attachment points in the modified 3D model, taking into account the planned post-operative anatomy. In this way, an implant structure optimally adapted to the planned post-operative anatomy can be obtained (see paragraph [0037]).

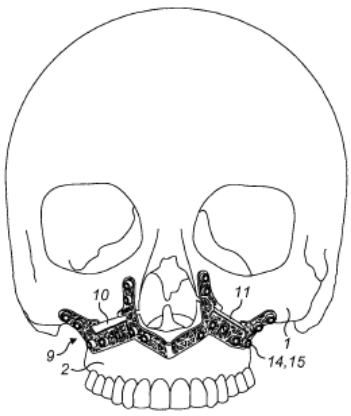

FIG. 6

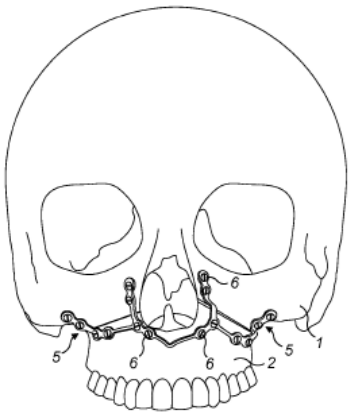

FIG. 9

Finally, the method comprises mapping the attachment points to corresponding locations on the pre-operative 3D model and determining a 3D structure for a surgical guide (9) that couples the corresponding locations of the attachment points in the pre-operative model (see Figure 6, reproduced above), each of these locations corresponding to a guide aperture in the surgical guide. In this way, a surgical guide associated with the implant and optimally adapted to the pre-operative anatomy can be also generated.

1.3 Compared to known methods in which the holes for the bone fixation devices in the implant are predefined or predrilled in an arbitrary manner, this method allows the bone fixation devices to be placed in the most favourable locations, for example with a reduced risk of damaging any important anatomical structure and in regions with the best bone quality (see paragraph [0037]).

2. Admittance of the main request and auxiliary request 4

2.1 The main request and auxiliary request 4 were filed for the first time in the entire proceedings with the appellant's statement of grounds of appeal. Therefore, they represent amendments and, accordingly, their admittance is at the Board's discretion pursuant to Article 12(4) RPBA. The respondent requested that they not be admitted.

2.2 At the oral proceedings before the Board, the parties did not make any further comments on this issue, referring instead to their written submissions. The Board therefore saw no reason to depart from its preliminary view expressed in its communication under

Article 15(1) RPBA (see point 2) and consequently admitted both requests for the following reasons.

2.3 The main request and auxiliary request 4 contain only subject-matter which was discussed in the decision under appeal. Therefore, these requests do not raise new issues on appeal going beyond those already discussed in the decision under appeal.

The main request is identical to auxiliary request 1 underlying the decision except that, additionally, the features of claim 2 as granted have been moved to claim 1 as new feature 1.9 and all apparatus claims (claims 11 to 16) have been deleted. These additional amendments immediately overcome two of the three added subject-matter objections under Article 123(2) EPC that the opposition division had found convincing against claims 1 and 11 of auxiliary request 1 (objections A and B; see decision under appeal, Reasons 13.3 to 13.3.3 and 13.4).

Auxiliary request 4 is based on auxiliary request 22 underlying the decision, which the opposition division found unallowable solely for lack of inventive step starting from D2 on the ground that the distinguishing features did not contribute to the technical character of the invention. Auxiliary request 4 includes the modifications to the granted claims specified in auxiliary request 11 underlying the decision under appeal in an attempt to overcome the inventive-step objection.

The respondent objected that the appellant had not explicitly substantiated why the added subject-matter objection to auxiliary request 16 underlying the decision under appeal, on the basis of which the

opposition division had not admitted that request (see Reasons 20.3 and 20.4) and which likewise applied to auxiliary request 4, was unconvincing. However, the appellant's arguments in respect of the main request that the original application supported the use of a computer by a user, the models involved in the method being "*virtual*" models (see point 6.1 on pages 14 to 17 of the statement of grounds of appeal), address that objection, at least implicitly. Auxiliary request 4 is therefore sufficiently substantiated.

The respondent's reference to T 312/19 is not pertinent to the current case. In T 312/19 (Reasons 3), the request not admitted by the deciding Board had been filed at a very late stage of the appeal proceedings, namely at the oral proceedings before the Board, and combined two independent claims of two different requests which the Board had regarded as allowable. In contrast, in the current case, as submitted by the appellant, the additional amendments made on appeal to auxiliary requests 1 and 22 underlying the impugned decision, leading to the newly filed main request and auxiliary request 4, streamline the discussion in the appeal proceedings compared to a situation in which auxiliary requests 1 and 22 would have been maintained unamended on appeal. In addition, the main request and auxiliary request 4 were filed with the appellant's statement of grounds of appeal, i.e. at the earliest stage of the appeal proceedings.

In these circumstances, the Board decided to admit the main request and auxiliary request 4.

3. Principles of claim interpretation

Claim interpretation played a decisive role in the case at hand, the parties making extensive submissions and disagreeing on the interpretation of the claims on a number of issues, ranging from general principles to specific details. The Board thus considers it appropriate to first address the applicable principles of claim interpretation.

3.1 In G 1/24, Reasons 12, the Enlarged Board listed the general principles of claim interpretation in the existing body of case law which it endorsed in view of the questions referred to it. The first of these principles of claim interpretation is that the claims are the starting point and the basis for assessing the patentability of an invention. The present Board understands this as a recognition that the claims define the claimed subject-matter (see also G 1/16, Reasons 12) and that it is the claims themselves which are being interpreted. Accordingly, the claims, on the one hand, and the description and the drawings, on the other hand, are not on the same footing. This understanding of the significance to be given to the claims aligns with Article 69 EPC (see T 1473/19, Reasons 3.16 to 3.16.2, referred to in G 1/24, Reasons 11), the wording and principles of which the Enlarged Board appears to consider applicable by analogy (see G 1/24, Reasons 15, first sentence). It is also consistent with the Enlarged Board's statement that this first principle of claim interpretation is a settled point in the case law of the Boards (see G 1/24, Reasons 13).

3.2 The second principle of claim interpretation endorsed by the Enlarged Board is that the description and drawings must always be consulted to interpret the claims, and not only if the person skilled in the art

finds a claim to be unclear or ambiguous when read in isolation. The present Board considers that it follows from this that - without prejudice to the requirement under Article 84 EPC that claims must be clear in themselves (see G 1/04, Reasons 6.2, and G 1/24, Reasons 20) - a claim should not be read in isolation. In other words, the meaning of a claim and its features is not to be determined in the abstract or on the basis of the skilled person's common general knowledge alone but in the specific context in which it is used, which includes the description and the drawings (as well as other claims). It goes without saying that if the description and the drawings must always be consulted to interpret the claims, this consultation may have an impact on the result of this interpretation. This impact is not limited to merely defining the person skilled in the art for the purposes of claim interpretation (see also T 439/22, Reasons 2.3, 2.4 and 3.4). Rather, the meaning of the language of the claims is informed by the technical context provided by the description and the drawings to the person skilled in the art, due account being taken of the claims themselves being the starting point and the basis of the assessment.

3.3 The above understanding of G 1/24 conforms with the Enlarged Board's reference to the harmonisation philosophy behind the EPC and its aim to prevent that the EPO adopt a practice of claim interpretation which would be contrary to the practice of the national courts of EPC contracting states and the UPC (see G 1/24, Reasons 15, 16; see also Reasons 19, referring to Headnote 2 of the order of the UPC Court of Appeal of 26 February 2024 in NanoString Technologies v. 10x Genomics, UPC_CoA_335/2023, as being consistent with its conclusions). While the Enlarged Board considered

Article 69 EPC not to be directly applicable when assessing patentability in the proceedings before the EPO (see G 1/24, Reasons 6 and 7), it appears to consider the principles underlying Article 69 EPC to be applicable by analogy in this assessment (see G 1/24, Reasons 15, first sentence). Such an application of Article 69 EPC by analogy achieves the intended harmonisation with the practice of the UPC and national courts of EPC contracting states, which directly apply the principles of claim interpretation set out in Article 69 EPC (see the list of national case law in T 367/20, Reasons 1.3.5). It also fits seamlessly with the direct applicability of Article 69(1) EPC and the Protocol thereto in proceedings before the EPO when interpreting a claim for assessing compliance with Article 123(3) EPC. In this assessment, these provisions have long been recognised by the EPO to provide "*a guide to the manner in which the technical features of the claim are to be interpreted*" (see G 2/88, Reasons 4).

3.4 The Enlarged Board also held in G 1/24, Reasons 4, that the departments of the EPO, in the course of their duties, are required to interpret patent claims when assessing the patentability of an invention. Determining a patent claim's subject-matter, i.e. establishing the meaning of the claimed features, is not distinguishable from interpreting that claim and its features (see T 1473/19, Reasons 3.11), and the terms in a given patent claim must be interpreted in a uniform, consistent and objective manner (see T 1345/23, Reasons 3.1.1, T 177/22, Reasons 3.1 to 3.3 and T 1473/19, Reasons 3.12.1). In the view of the present Board, it follows that the same claim-interpretation step which, in accordance with G 1/24, must be carried out when assessing e.g. novelty must,

for reasons of consistency, also be carried out when e.g. assessing added subject-matter, sufficiency of disclosure or extension of protection. This also aligns with the UPC Court of Appeal's statement in its order of 26 February 2024 in NanoString Technologies v. 10x Genomics, UPC_CoA_335/2023, point 2 of the Headnote, according to which the "*principles for the interpretation of a patent claim apply equally to the assessment of the infringement and the validity of a European patent*", the term "*validity*" not being limited to "*patentability*" under Articles 52 to 57 EPC.

3.5 In decision T 1791/16, referred to by the parties, the deciding Board held in Reasons 11 that a lack of clarity of a granted claim caused ambiguity as to what the subject-matter of the claim was. The Board then considered all technically reasonable interpretations resulting from that ambiguity, in that case for assessing added subject-matter. Similarly, in decision T 837/24, dealing with Article 123(3) EPC, the deciding Board stated in Reasons 3.3.3 that if a granted claim allowed for several technically meaningful interpretations, it had to be ensured that according to neither of these interpretations the protection conferred by the claim was extended under Article 123(3) EPC, irrespective of which interpretation was more likely. In the view of the present Board, the requirement "*to interpret patent claims*" pursuant to G 1/24 implies that the correct interpretation of a claim cannot - if decisive for the outcome - be left open. As to a possible lack of clarity or ambiguity in a claim, the present Board considers that this can, as such, only be addressed under Article 84 EPC, which is not a ground for opposition. The fact that lack of clarity is not available as a ground for opposition cannot justify

invoking such a deficiency indirectly – through the back door, so to speak – under a different legal provision not concerned with this issue, such as Article 123(2) or (3) EPC. This would amount to circumventing the legislator's deliberate exclusion of lack of clarity as a ground for opposition (see G 3/14, Reasons 71). As the Enlarged Board stated in G 3/14, Reasons 80 (i), "*opposition proceedings are not designed as a procedure for generally amending (or revoking) patents which contain any kind of defect*". This does not, of course, preclude that a lack of clarity can have ramifications on how the deciding body interprets the claim under consideration and determines the claimed subject-matter, which may in turn have an impact on the outcome of the assessment of a ground for opposition under Article 100 EPC (see G 3/14, Reasons 55). However, adopting e.g. a broad interpretation must be distinguished from leaving the interpretation open or adopting two mutually exclusive claim interpretations simultaneously (see T 367/20, Reasons 1.3.9 and 1.3.10).

4. Interpretation of claim 1 of the main request

4.1 The parties disagree on the interpretation of claim 1.

Applying the principles of claim interpretation set out above, the Board establishes the interpretation of the claim features relevant for the outcome of the case at hand. In line with the above, the following claim interpretation is adopted for all issues dealt with in this decision.

4.2 The Board considers that, in the context of the method defined in claim 1, the expression "*computer-implemented*" requires the method, i.e. all steps of the

method, to involve a computer. This is particularly so since the claimed method involves the generation and use of 3D models of a patient's anatomy (especially one generated using data), the simulation of an osteotomy and the repositioning of bone portions in these 3D models, as well as the determination, in these 3D models, of 3D structures for an implant and a surgical guide. Before claim 1 was amended to include the expression "*computer-implemented*", the subject-matter of claim 1 was broader, leaving it open whether the method steps were implemented with the involvement of a computer. The claimed subject-matter thus arguably also extended to a method in which one or more steps were implemented entirely without a computer, i.e. exclusively by a user not using a computer. This is no longer the case.

4.3 When consulting the patent specification, the person skilled in the art finds that it likewise consistently describes the use of a computer to carry out the various method steps, in particular to generate and manipulate the virtual 3D models. This is shown, for example, in paragraphs [0016] ("*processed on a computer using a specific application to generate a three-dimensional reconstruction of the images*"), [0018] ("*use a system of surgical navigation* [...] *virtually*"), [0020] ("*carrying out, still in a virtual manner*"), [0029] ("*using a computer*"), [0030] ("dedicated planning software") and [0094] ("*using a computer*").

4.4 The amendment made in claim 1 does, however, still not exclude the involvement of a user in addition to the involvement of a computer, i.e. that the steps of the method additionally involve the input of a user on the computer. More specifically, the person skilled in the

art understands that, as asserted by the appellant, all method steps recited in claim 1 are carried out by the computer, regardless of whether there is, at least for some of them, also input of a user (in the appellant's words "*all steps of Claim 1 are supported by the computer, they are either performed by the computer or on the computer*", see the appellant's submission of 20 May 2025, page 6, third paragraph). In other words, the expression "*computer-implemented*" in claim 1 does not require that all steps be carried out automatically by the computer.

4.5 The expression "*computer-implemented method*" does not rule out that the steps of the method carried out by the computer may involve input from a user. Thus, the fact that some of the claimed steps may rely, at least implicitly, on input from a user (presumably using an ad hoc user interface) does not contradict this interpretation. In the Board's view, these claimed steps include the steps of selecting the cuts that define the simulated osteotomy and arranging the bone portions to place them (in the 3D modified model) in their "*desired*" post-operative orientations. The person skilled in the art understands the term "*desired*" in claim 1 as referring to the intention of a user using the computer. Nevertheless, it is still, in the end, the computer that carries out ("*simulates*") the osteotomy and moves ("*arranges*") the data representing the bone portions in the computer's memory in accordance with the user's instructions.

4.6 The patent specification presents the same picture and consistently describes a computer as carrying out the claimed method steps under user supervision. More particularly, according to the description the steps of selecting the attachment points in the 3D modified

model and determining the 3D structures of the implant and surgical guide are computer-implemented but, in view of the user input referred to in e.g. paragraphs [0033] ("*the user defines the future fixing locations*"), [0040] ("*the user may subsequently draw the implant*") and [0048] ("*a user may "draw" or otherwise define within the virtual model, the surgical guide*"), not necessarily carried out automatically by the computer.

4.7 The respondent had contended in its reply to the statement of grounds of appeal that this interpretation had been put forward by the appellant for the first time on appeal and requested that it not be admitted. However, since, as set out below, the subject-matter of claim 1 of the main request is found to lack an inventive step starting from D2 based on this interpretation, there is no need for the Board to address this issue of admittance. The respondent did not address it at the oral proceedings before the Board either.

5. **Main request - novelty and inventive step in view of D2**

5.1 The subject-matter of claim 1 of the main request is novel in view of D2 but does not involve an inventive step starting from that document.

5.2 Novelty in view of D2

5.2.1 D2 discloses a computer-implemented method for configuring a surgical guide and an associated implant for maxillofacial osteosynthesis (see title: "*Computer-Aided Design* [...] *Locating Guides Accompanied With Prebent Titanium Plates in Orthognathic Surgery*"), the method comprising:

- accessing data indicative of a pre-operative maxillofacial anatomy of a patient (computed tomography data of the patient's maxillofacial skeleton; see page 2419, right-hand column, last three lines) and generating a 3D model of said anatomy using said data (the pre-operative - virtual - 3D model shown in Figure 1C on page 2420; see the sentence bridging pages 2419 and 2420)

- simulating an osteotomy on the 3D model of the pre-operative maxillofacial anatomy, said simulated osteotomy defining at least one cut that results in a second bone portion that is separated from a first bone portion, said osteotomy resulting in an absence of any bone coupling the first and second bone portions together (see Figure 2A and page 2420, right-hand column, first paragraph)

Hence, D2 discloses features 1.1 to 1.3. This was not in dispute between the parties.

5.2.2 Contrary to the appellant's argument, D2 further discloses features 1.4 to 1.5.1 and 1.9.

D2 discloses arranging the second bone portion in relation to the first bone portion to generate a modified 3D model indicative of a desired post-operative orientation of the first and second bone portions, said arrangement comprising at least one of a translation and a rotation of the second bone portion in relation to the first bone portion (see page 2420, right-hand column, lines 5 to 8: "*virtual osteotomies were completed using the Osteotomy Wizard tool, and the isolated maxillary segment was moved using the Reposition tool (Fig 2)*" and Figures 2A and 2B). The

Board agrees with the appellant that the resin model described in D2, being a physical model, does not anticipate a virtual computer model. However, the Board refers here to the virtual, modified 3D model resulting from the virtual arrangement of the bone portions in their desired post-operative orientation, shown in Figure 2B, and not to the physical resin model. It is on the basis of this virtual, modified 3D model that the physical resin model in question is fabricated (see page 2420, right-hand column, first two paragraphs). Thus, D2 discloses feature 1.4.

It is true, as argued by the appellant, that D2 discloses that the locations of the screw holes, which correspond to the drilling apertures to be provided in the surgical guide to be designed, are initially marked on the physical resin model (these locations being those of the screw holes provided in the titanium plates, after the latter have been adapted to the planned post-operative anatomy by shaping them on the physical resin model), and not directly on the modified 3D model (see page 2420, right-hand column, lines 28 to 32, and Figure 4). However, D2 discloses that the marked locations are acquired by scanning the resin model and then merged into the modified 3D model (see page 2420, right-hand column, last complete paragraph). It is indeed at these locations of the modified 3D model that cylinders are generated (see Figure 4C), which are used in the subsequent steps to define the drilling apertures of the surgical guide to be designed. Merging the acquired locations of the screw holes into the modified 3D model amounts to defining attachment points of the modified 3D model. Claim 1 of the main request does not exclude the possibility of the attachment points being indirectly defined by such a process. D2 therefore discloses feature 1.5.

Moreover, since the locations marked on the physical resin model correspond to the locations of the screw holes of the titanium plates after the latter have been shaped to the planned post-operative anatomy by bending them on the resin model, these locations, and thus the locations of the attachment points in the modified 3D model obtained by scanning and merging, are defined based on at least one location of one or more anatomical features of the patient. This is all the more so as these locations will necessarily be selected on the physical resin model so as to exclude anatomical locations where there is no bone, as held by the opposition division in the decision under appeal (see Reasons 27.3.2). Thus, D2 also discloses feature 1.5.1.

In addition, D2 also discloses feature 1.9, as held by the opposition division in the decision under appeal (see Reasons 27.5 to 27.5.2) in view of the specific plates and set of attachment points shown in Figure 5C. The appellant did not argue why this would not be the case. Moreover, the fact that off-the-shelf standard titanium plates as used in D2 may have predefined, fixed hole spacing, as submitted by the appellant, does not prevent feature 1.9 from being fulfilled in practice for these plates, especially since the plates are bent to adapt them to the post-operative anatomy, which changes the relative spacing of the corresponding attachment points.

5.2.3 Contrary to the appellant's view, D2 further discloses the following steps:

- mapping the first and second plurality of attachment points to corresponding locations on the 3D model of the pre-operative maxillofacial anatomy (see page 2420,

right-hand column, last complete paragraph: "*The positions of the screw holes for the prebent plates before the osteotomies were determined (Fig 4)*" and Figure 4D)

- determining a monolithic three-dimensional structure for the surgical guide that couples the corresponding locations in the 3D model of the pre-operative maxillofacial anatomy, wherein each of at least one of the corresponding locations corresponds to a guide aperture in said structure for the surgical guide (see paragraph bridging pages 2420 and 2421: "*Templates (2-mm thick) were generated* [...] *the locations of the cylinders as virtual markers were expressed as drill holes on the preosteotomy templates*")

Thus, D2 also discloses features 1.7 and 1.8.

5.2.4 On the other hand, contrary to the respondent's argument and the opposition division's conclusion in the decision under appeal (see Reasons 27.4 to 27.4.3), D2 does not disclose feature 1.6.

At the oral proceedings before the Board, the parties did not provide any further comment on this issue, referring instead to their written submissions. The Board therefore maintained its preliminary opinion expressed in the communication under Article 15(1) RPBA and reiterated below.

Feature 1.6 requires determining not just any 3D structure for the implant but one "*that couples the attachment points in the modified 3D model*". Consistent with the interpretation of claim 1 adopted by the Board (see point 4. above), the person skilled in the art therefore understands that the 3D structure for the

implant is determined (i) as a structure in the modified 3D model, not in the physical world, and (ii) based on, *inter alia,* the locations of the attachment points, meaning that the structure is determined only after the attachment points have been defined in the modified 3D model. Otherwise, the statement that not just any structure for the implant is determined but one "*that couples the first and second plurality of attachment points in the modified three-dimensional model*" would be devoid of purpose.

By contrast, the titanium plates in D2, which are shaped by bending them on the resin model, are pre-existing implants which at most define a 3D structure in the physical world. D2 does not disclose any operation, such as a scanning step, that would amount to determining a 3D structure of the plates in the modified 3D model. Furthermore, in D2, it is the titanium plates that, once shaped, define the attachment points, as set out above in relation to features 1.5 and 1.5.1, and not, conversely, the attachment points that, once defined, determine the shape of the titanium plates. Therefore, contrary to the respondent's argument, the person skilled in the art would not regard the shaping of the titanium plates on the resin model as disclosing the determination of a monolithic 3D structure for the implant that couples the attachment points - let alone in the modified 3D model.

The subject-matter of claim 1 is therefore novel over D2.

5.3 Inventive step starting from D2

5.3.1 It follows from the foregoing that feature 1.6, interpreted as set out in point 5.2.4 above, is the only feature distinguishing the subject-matter of claim 1 of the main request from the method disclosed in D2.

5.3.2 It is common ground that feature 1.6 is non-technical when considered in isolation since it merely corresponds to the generation of abstract data representing a 3D structure for an implant. A feature that is non-technical as such may, however, still contribute to the technical character of the claimed invention as a whole (see G 1/19, Reasons 32; see also order of the UPC Court of Appeal of 17 April 2026 in Abbott v. Sinocare, UPC_CoA_901/2025, Headnote 1 and Reasons 112).

A central issue is therefore whether this feature contributes to the technical character of the method defined by claim 1. Only if this is the case, and only to this extent, can it be considered for inventive step, following the COMVIK approach (see G 1/19, Reasons 84).

Furthermore, for the claimed invention to involve an inventive step over substantially the whole scope of the claim, it must also be technical over substantially the whole scope (see G 1/19, Reasons 98).

5.3.3 Manufacturing an implant having the 3D structure determined in accordance with feature 1.6 would undisputedly allow this feature to have an impact on physical reality and thus to contribute to achieving a technical effect, for example by leading to a physical implant having the advantages mentioned by the appellant.

However, the outcome of the claimed method is not a physical implant but merely abstract data defining a 3D structure for such an implant.

Notably, claim 1 of the main request does not refer to any manufacturing step.

Furthermore, while, in accordance with the established way of interpreting the term "*for*" in the expression "*method for*", the step of "*configuring*" an implant mentioned in feature 1.1 is to be considered part of the claimed method, the person skilled in the art does not understand, in the context of claim 1, the configuring of an implant to mean, or to include, manufacturing it. This was not disputed by the appellant. This understanding is further supported by the description of the patent, which states that the (configured) implant "*may be manufactured or produced based on the defined structure*" (paragraph [0044]; emphasis added), i.e. that it need not necessarily be manufactured or produced.

The Board notes that the step of configuring the implant may involve further processing of the 3D structure determined in accordance with feature 1.6. However, even in that case, the configuring step would still merely produce further data defining the configured implant.

5.3.4 Contrary to the appellant's view, it is not decisive that the data produced by the claimed method, in defining the 3D structure of the configured implant, may reflect the properties of a physical object that may exist at some later point, namely the implant once manufactured.

Rather, this physical object remains purely hypothetical as long as an implant having this structure is not manufactured. Hence, in the absence of a manufacturing step in claim 1, the data remains, first and foremost, mere data, which can be used in many different ways (see G 1/19, Reasons 98).

5.3.5 In accordance with G 1/19, Reasons 124, only those technical effects that are at least implied in the claim should be considered in the assessment of inventive step. If the claimed process results in a set of numerical values, whether a resulting technical effect can be considered in the assessment of inventive step depends on the further use of such data. If such further use is not, at least implicitly, specified in the claim, it is to be disregarded for this purpose.

It must therefore be assessed whether claim 1 of the main request at least implicitly specifies a further technical use of the data generated as an outcome of the claimed method.

5.3.6 The Board acknowledges that manufacturing the implant is a possible use of this data. As also pointed out in the decision under appeal (see Reasons 33.8.3), this may even be regarded as a probable use of the data. However, a possible, or even probable, technical use is not sufficient for the data to contribute to the technical character of the claimed method. What is required, in accordance with G 1/19, Reasons 137, is that the technical use be at least implicitly specified in the claim.

This is not the case here.

First, as stated above, the claimed method is directed to configuring the implant, not to manufacturing it. Although the open wording of claim 1 may encompass more limited methods comprising an additional manufacturing step (see point 6.4 below), the use of the data for manufacturing the implant is not specified, either explicitly or implicitly, as part of the claimed method.

Contrary to the appellant's argument, the indication in feature 1.1 that the implant is "*for maxillofacial osteosynthesis*" does not imply a technical use of the data resulting from the claimed method. Unlike the term "*for*" in the expression "*method for configuring*" which, as stated above, means that the configuring of the implant forms part of the claimed method, the expression "*implant for maxillofacial osteosynthesis*", in contrast, merely indicates the suitability of the implant for that medical use. However, this does not require, or necessarily imply, that the data generated by the claimed method will be used to manufacture such an implant or that the implant will subsequently be used in surgery.

Second, the data resulting from the claimed method is not defined in claim 1 as being specifically adapted for a technical use. This might have been the case, for example, if the claim had required the data to be formatted so as to be directly readable by, or usable in, a specific manufacturing apparatus, such as a 3D printing device. Claim 1, however, contains no such limitation. While the appellant alleged that the data generated by the claimed method was specifically adapted for designing and manufacturing a custom surgical implant, it did not identify any feature of

claim 1 requiring the data to be formatted for use in a specific manufacturing apparatus.

5.3.7 Furthermore, the Board agrees with the respondent and the opposition division that although manufacturing the implant is a possible and even probable use of the 3D implant structure determined in accordance with feature 1.6, other uses which do not have any technical effect can also be realistically envisaged. As convincingly put forward by the respondent during the oral proceedings before the Board, a user may, for example, carry out the claimed method and obtain data defining the 3D structure for the configured implant without using the data for manufacturing the implant or for any other technical purpose (see G 1/19, Reasons 98, in this regard). For example, a user may simply want to compare the configured implant with existing implants, such as off-the-shelf implants. At least in such a case, no impact on physical reality would result from carrying out the claimed method. Thus, there is no need to address whether there are further realistic non-technical uses, such as the cost estimations referred to by the respondent.

5.3.8 For similar reasons as set out in point 5.3.4 above, it is also irrelevant that the implant configured by the claimed method, once manufactured, may have technical advantages and achieve technical effects, as claimed by the appellant. These alleged advantages and effects presuppose that an implant having the configured 3D structure is manufactured, which is not specified in the claim.

5.3.9 The appellant also submitted that the pre-operative 3D model was generated using data indicative of the anatomy of a real existing patient (feature 1.2) and

that the implant configured by the method was customised so as to achieve a desired maxillofacial reconstruction for that patient, taking their anatomical features into account. According to the appellant, this anchored the claimed method in physical reality and thus rendered the data produced by the method itself technical in nature.

The Board is not persuaded by this argument either.

It is correct that G 1/19, Reasons 99, acknowledges that indirect measurements, in which the physical state of an object is typically calculated, are still related to physical reality and thus are of a technical nature, regardless of what use is made of the results.

However, the current case is not one of indirect measurement of a physical object as discussed in G 1/19. Claim 1 is not directed to determining, by calculation, the physical state or a physical property of an existing object. Rather, it is directed to determining abstract data defining the 3D structure of an implant which does not yet physically exist. The fact that the method starts from data indicative of a pre-operative anatomy does not change the nature of the data ultimately produced by the claimed method, nor does it imply any further technical use of this data.

5.3.10 It follows that feature 1.6 does not contribute to the technical character of the claimed method, certainly not over substantially the whole scope of claim 1. This feature thus cannot support the presence of an inventive step starting from D2.

The Board therefore concludes that the subject-matter of claim 1 of the main request does not involve an

inventive step starting from D2. Consequently, the main request is not allowable.

6. Auxiliary request 1 - extension of scope of protection

6.1 Article 123(3) EPC provides that a European patent may not be amended in such a way as to "*extend the protection it confers*". Article 64(2) EPC also addresses the extent of protection. Pursuant to that provision, if the subject-matter of the European patent is a process, the "*protection conferred*" by the patent shall "*extend*" to the products directly obtained by such process. In view of the wording of these two provisions and the Enlarged Board's statement in G 2/88, Reasons 5.1, the present Board considers that assessing a possible extension of a patent's scope of protection under Article 123(3) EPC must include possible changes of the scope of protection due to Article 64(2) EPC (see, for example, also T 1635/09, Reasons 14.2).

6.2 Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that, *inter alia*, the claimed method further includes the production of the implant.

The respondent objected that this amendment extended the scope of protection conferred by the patent as granted, contrary to Article 123(3) EPC. As set out below, the Board agrees with the respondent.

6.3 *Protection conferred by claim 1 of auxiliary request 1*

It is not in dispute between the parties, and the Board agrees, that claim 1 of auxiliary request 1, by explicitly including a step of producing the implant, confers protection not only to the claimed method but

also, pursuant to Article 64(2) EPC, to the implant directly obtained by that method, i.e. to a physical implant produced in accordance with the method defined in claim 1 of auxiliary request 1.

6.4 Protection conferred by claim 1 as granted

6.4.1 It is also not in dispute, and the Board also agrees, that a method comprising all the steps of claim 1 as granted and, in addition, a step of producing the implant also falls within the scope of claim 1 as granted, even though claim 1 as granted does not comprise any production step. This is because the added production step merely limits the method defined in claim 1 as granted.

For this reason, as held by the opposition division in the decision under appeal (see Reasons 22.4), the addition of a production step to claim 1 as granted does not extend the protection conferred by the patent as granted to a method that would not be protected by the patent as granted.

6.4.2 However, taking account of Article 64(2) EPC, this does, contrary to the appellant's view, not automatically mean that the scope of protection was not extended. The physical implant which is, within the meaning of Article 64(2) EPC, directly obtained by the more limited method according to auxiliary request 1 was not protected by claim 1 as granted.

As set out above for the main request, carrying out the method of claim 1 as granted results only in the *configuration* of an implant, i.e. in data defining such a configured implant. It does not result in a physical implant.

The appellant argued that, since a method including an additional production step fell within the scope of claim 1 as granted, the product directly obtained by that more limited method was also covered by the protection conferred by claim 1 as granted, by virtue of Article 64(2) EPC.

The Board does not consider this persuasive.

Pursuant to Article 64(2) EPC, if the subject-matter of the patent is a process, the protection conferred by the patent extends to products directly obtained by such a process. This provision therefore requires that the product in question be "*directly*" obtained by the claimed method. The Board understands this to mean that the protection conferred by a process claim does not, as a rule, extend to products obtained only by carrying out further steps which are neither defined in that claim nor implied by it.

In the case at hand, what is directly obtained when carrying out the claimed method is merely data. Having regard to the purpose of Article 64(2) EPC, a physical medium storing that data, for instance, could still be considered to fall within its scope (see decision of the German Federal Court of Justice, MPEG-2-Videosignalcodierung, X ZR 33/10 of 21 August 2012, point b) of the Headnote). However, using the data obtained by carrying out the method defined in claim 1 as granted when manufacturing a physical implant is an entirely different matter. A physical implant is, in terms of its characteristics, far removed from mere data configuring that implant, which is what is obtained when carrying out the claimed method. Therefore, a physical implant is not "*directly*"

obtained, within the meaning of Article 64(2) EPC, by the method defined in claim 1 as granted.

It does not support the appellant's position that the patent specification, which indeed must, for the purposes of assessing the extent of protection under Article 123(3) EPC, be used to interpret the claims in direct application of Article 69(1) EPC, states in paragraph [0044] that an implant "*may be produced based on the defined structure*" determined in accordance with the method defined in claim 1 as granted. This indicates the opposite, namely that the production of the implant is optional and not a constituent or defining feature of the claimed method.

Consequently, the protection conferred by claim 1 as granted in accordance with Article 64(2) EPC does not extend to a physical implant.

6.5 The case law regarding Article 123(3) EPC cited by the appellant does not help its case. It mainly concerns whether the scope of protection may be extended by additional features in view of national infringement laws such as the rules on contributory infringement. It does, however, not address a situation like in the current case, where Article 64(2) EPC plays a decisive role.

6.6 The appellant also argued that a third party designing and producing an implant according to claim 1 of auxiliary request 1 would already have infringed claim 1 as granted. Hence, the amendment did not put third parties in a worse position.

The Board does not consider this argument persuasive. In essence, it boils down to saying that third parties

cannot suffer any disadvantage if a process claim is, after amendment, more limited than before. This is allegedly so because a third party implementing all features of process claim 1 as granted and then additionally manufacturing a configured implant would already be infringing the patent as granted and not only amended claim 1 including the manufacturing feature. This is, however, not the correct test.

As set out above, Article 64(2) EPC must be taken into account when assessing compliance with Article 123(3) EPC. The product protection conferred by Article 64(2) EPC is different from, and additional to, the protection conferred by a process claim as such. Hence, if a part of the patent's scope of protection is, in view of Article 64(2) EPC, extended because of the amendment, Article 123(3) EPC is infringed. In such a situation, it does not matter whether the patent's scope of protection is partly also, with regard to the process claim as such, more limited than before the amendment. Generally speaking, this is comparable to how an *aliud* partly extending and partly limiting the scope of protection also infringes Article 123(3) EPC.

6.7 Hence, if a granted claim defines a computer-implemented method for configuring a physical object which, when carried out, merely results in data representing that physical object, and not in the object itself, amending the claim such that it additionally includes the step of manufacturing the physical object so configured is, in view of Article 64(2) EPC, not allowable under Article 123(3) EPC.

6.8 In the case at hand, the addition of a production step to claim 1 as granted, as made in auxiliary request 1,

extends the protection conferred by the patent as granted to products, namely implants produced by the method of claim 1 of auxiliary request 1, which are not protected by the patent as granted. The requirement of Article 123(3) EPC is therefore not met, and auxiliary request 1 is not allowable.

7. Auxiliary requests 2 to 4 - inventive step starting from D2

7.1 Claim 1 of auxiliary request 2 is based on claim 1 of the main request and additionally specifies that the data used to generate the pre-operative 3D model is "*radiographic or tomodensimetric data*" and that the 3D model is generated by processing that data on a computer. These additional limitations are not novel over D2, which discloses that computed tomography data is processed for this purpose, using specific software (see page 2419, right-hand column, last three lines).

7.2 Claim 1 of auxiliary requests 3 and 4 further clarifies that the determination of the 3D structure for the implant takes place following the definition of the attachment points, that the 3D models indicative of the pre- and post-operative anatomies are virtual models, and that the structures for the implant and the surgical guide are determined in a virtual 3D space. As apparent from the considerations made for the main request, these additional limitations either are also disclosed in D2 or correspond to the Board's understanding of feature 1.6.

7.3 In line with the Board's preliminary opinion expressed in the communication under Article 15(1) RPBA (see point 6.2), it follows that the limitations added to claim 1 in each of auxiliary requests 2 to 4 do not

overcome the lack of technical character established above for claim 1 of the main request. This was not disputed by the appellant, which did not provide any further comments on this at the oral proceedings before the Board.

Hence, auxiliary requests 2 to 4 are not allowable.

8. Conclusion

It follows that none of the appellant's claim requests are allowable. The appeal is therefore to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

A. Chavinier-Tomsic M. Alvazzi Delfrate

Decision electronically authenticated