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Datasheet for the decision of 16 February 2016

Case Number: T 0430/14 - 3.2.08

Application Number: 02800394.5

Publication Number: 1441641

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Language of the proceedings: EN

Title of invention:
METHOD AND APPARATUS FOR FABRICATING ORTHOGNATHIC SURGICAL SPLINTS

Patent Proprietor:
BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM

Opponent:
Nobel Biocare AB

Headword:

Relevant legal provisions:
EPC Art. 100(c), 84, 123(2), 123(3), 111(1)

Keyword:
Grounds for opposition - added subject-matter, main request(yes)
Claims - clarity - auxiliary request 1 (no) - clarity - auxiliary request 12 (yes)
Amendments - extension beyond the content of the application as filed, auxiliary request 12 (no)

Decisions cited:
G 0003/14

Catchword:

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Case Number: T 0430/14 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 16 February 2016

Appellant: (Patent Proprietor)	BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM 201 West 71th Street Austin, TX 78701 (US)
Representative:	Palmer, Nicholas James Forresters Skygarden Erika-Mann-Strasse 11 80636 Munchen (DE)
Respondent: (Opponent)	Nobel Biocare AB Box 5190 402 26 Göteborg (SE)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 13 December 2013 revoking European patent No. 1441641 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	C. Herberhold
	D. T. Keeling

Summary of Facts and Submissions

I. By its decision posted on 13 December 2013 the Opposition Division revoked European patent EP-B-1441641. The Main Request (patent as granted) was found to be not allowable on the ground of Article 100(c) EPC. The then first Auxiliary Request was found to violate the requirements of Article 123(2) and (3), the then second Auxiliary Request was found to violate the requirements of Article 123(3). Auxiliary Requests 8 and 9 filed during the oral proceedings were not admitted.

II. The appellant (patent proprietor) lodged an appeal against that decision in the prescribed form and within the prescribed time limit.

III. Oral proceedings before the Board of Appeal were held on 16 February 2016.

At the end of the oral proceedings the requests of the parties were as follows:

The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (Main Request) or on the basis of the claims of Auxiliary Request 1, filed on 15 January 2016 (corresponding to Auxiliary request 2 of the opposition proceedings), or on the basis of the claims of one of Auxiliary Requests 12-14, filed during oral proceedings before the Board. All other auxiliary requests were withdrawn.

The respondent (opponent) requested that the appeal be dismissed or - should grounds of opposition not dealt with in the proceedings at first instance become

relevant - that the case be remitted to the Opposition Division.

IV. Independent claims 1 and 7 as granted read as follows:

Claim 1:
"(1.1) A method of forming a composite computer model (26) of a patient's bone structure and dentition, comprising:
(1.2) positioning a plurality of fiduciary markers (20) relative to an impression of the patient's dentition;
(1.3) generating a three-dimensional computed tomography computer model of the patient's bone structure and the fiduciary markers (20) for the patient's upper jaw, lower jaw, and at least a portion of the patient's skull;
(1.4) generating a digital dental computer model of the patient's dentition and the fiduciary markers (20);
(1.5) combining the computed tomography computer model and the digital dental computer model by aligning the fiduciary markers to form a composite computer model (26); and
(1.6) displaying the composite computer model (26)."

Claim 7:
"(7.1) A workstation (50) for forming a surgical splint (32) to receive a patient's dentition and thereby align both the upper jaw and the lower jaw relative to the patient's skull during surgery, comprising:
(7.2) a three-dimensional computed tomography machine (52) for generating a CT model of bone structure for the patient's upper jaw, lower jaw, and at least a portion of the patient's skull;
(7.3) a digital scanner (54) for generating a digital dental computer model of the patient's dentition;

(7.4) a computer for combining the CT computer model and the digital dental computer model by aligning digital markers corresponding to a plurality of fiduciary markers (20) positioned relative to an impression of the patient's dentition to form a composite computer model (26);
(7.5) an input command mechanism (60) for repositioning at least one of the upper jaw and the lower jaw relative to the patient's skull to form, a desired position computer model;
(7.6) a display (58) for displaying the desired position computer model; and
(7.7) a fabricating machine (62) for inputting the desired position computer model data to fabricate a surgical splint (32)."

Feature identifiers 1.1-1.6 and 7.1-7.7 have been added by the Board.

V. The claims of Auxiliary Request 1 differ from the patent as granted in that the following features of claims 1 and 7 have been amended (amendments underlined):

Claim 1

(1.2') "positioning a plurality of fiduciary markers (20) relative to an impression of the patient's dentition by securing fiduciary markers (20) to an impression tray;
making an impression of the patient's dentition using the impression tray;"

(1.4') "generating a digital dental computer model of the impression of the patient's dentition and the fiduciary markers (20);"
Features 1.1, 1.3, 1.5-1.6 have remained unchanged.

Claim 7:

(7.3') "a digital scanner (54) for generating a digital dental computer model of an impression of the patient's dentition;"

(7.4') "a computer for combining the CT computer model and the digital dental computer model by aligning digital markers corresponding to a plurality of fiduciary markers (20) secured to an impression tray and positioned relative to an impression of the patient's dentition to form a composite computer model (26);"

Features 7.1, 7.2, 7.5-7.7 have remained unchanged.

VI. The claims of Auxiliary Request 12 differ from the patent as granted in that the following features of claims 1 and 7 have been amended (amendments underlined):

(1.2'') "positioning a plurality of fiduciary markers (20) relative to an impression of the patient's dentition by securing fiduciary markers (20) to an impression tray and making the impression of the patient's dentition using the impression tray;"

(1.4'') "generating from the impression a digital dental computer model of the patient's dentition and the fiduciary markers (20);"

Features 1.1, 1.3, 1.5-1.6 have remained unchanged.

Claim 7:

(7.3'') "a digital scanner (54) for generating from an impression of the patient's dentition a digital dental computer model of the patient's dentition;"

(7.4'') "a computer for combining the CT computer model and the digital dental computer model by aligning digital markers corresponding to a plurality of fiduciary markers (20) secured to an impression tray and positioned relative to the impression of the patient's dentition to form a composite computer model (26);"

Features 7.1, 7.2, 7.5-7.7 have remained unchanged.

Furthermore, dependent claim 5 has been amended as follows:

"A method according to any one of the preceding claims wherein the digital dental model is formed by laser surface scanning the impression of the patient's dentition."

VII. Auxiliary Requests 13 and 14 do not play a part in this decision.

VIII. The essential arguments of the appellant can be summarised as follows:

Main Request - Article 100(c) EPC

Claim 1 as granted was based on claim 7 as originally filed, claim 7 as granted originated from claims 13 and 14 as filed, the only amendments being that features 1.2 and 7.4 were worded more precisely, now defining that the plurality of fiduciary markers was positioned relative to an impression of the patient's dentition, instead of the original wording which stated that the

plurality of fiduciary markers was positioned relative to the patient's dentition or which was silent on fiduciary markers. However, for the skilled person reading the claims with a mind willing to understand, in accordance with the overall teaching of the application, both wordings gave exactly the same information. Moreover, making an impression using a tray with fiducial makers was disclosed in Figure 8. Indeed, the claim interpretation brought forward by the opposition division and the respondent, assuming that the impression had to be taken first with the fiduciary markers being installed relative to that pre-taken impression only later, would immediately be ruled out by the skilled person as illogical. Consequently, the amendments in granted claims 1 and 7 did not add new technical information over the claims as originally filed, and Article 100(c) EPC thus did not prejudice the maintenance of the patent as granted.

Auxiliary request 1 - Article 84 EPC

It was true that the amendments in features 1.2' and 1.4' had to fulfil the requirements of Article 84 EPC This was however the case for the following reasons:

Firstly, although an impression was mentioned twice in feature 1.2', it was clear that one and the same impression was referred to. Indeed, the feature first gave the result, i.e. the plurality of fiduciary markers being positioned relative to an impression, and then - as indicated by the word "by" - further defined how said result was achieved, i.e. by securing fiduciary markers to an impression tray; making an impression of the patient's dentition using the impression tray. There was thus clearly only one impression and no doubt concerning

the time sequence, the impression being made after securing fiduciary markers to an impression tray.

Secondly, there was no difference between a model of the impression of the dentition and a model of the dentition itself. Both were nothing more than a two-dimensional surface, which was then to be included into the composite computer model.

Thirdly, it had to be kept in mind that claim 5 was a dependent claim thereby including all the features of claim 1. It was thus clear that the step of laser surface scanning the patient's dentition could only mean laser surface scanning of the impression of the patient's dentition.

Therefore, features 1.2' and 1.4' met the requirements of Article 84 EPC.

Auxiliary Request 12 - Admission into the proceedings

Auxiliary Request 12 addressed all the objections discussed and found convincing by the Board during the course of the oral proceedings. It thus respected the need for procedural efficiency. Furthermore, the amendments were only minor and used language which had been proposed already at the beginning of the appeal proceedings and which was thus well known to the respondent. Hence, the new subject-matter was also of low complexity. Furthermore it should be kept in mind that, in the summons, the opposition division had found none of the grounds of opposition convincing, revising its opinion only during the hearing. It was thus only during the hearing in opposition proceedings that the appellant had learned that the Article 100(c) EPC objection was considered valid, and only with the

notification of the decision which of the objections brought forward by the respondent in this context had effectively been found persuasive. The appropriate requests had been submitted at a very early stage of the appeal proceedings; only minor modifications were added later in a constructive and proportionate reaction to the course of the proceedings.

Finally, as new Auxiliary Request 12 addressed and overcame all objections under Articles 84 and 123(2) EPC mentioned as relevant by the Board during the oral proceedings up to that moment, also the requirements of these Articles were *prima facie* fulfilled.

Therefore, Auxiliary Request 12 should be admitted into the proceedings.

Auxiliary Request 12 - Article 84 EPC

Amended feature 1.2'' clarified feature 1.2 of claim 1 as granted by explicitly explaining how the step of "positioning a plurality of fiduciary markers relative to an impression of the patient's dentition" was actually performed, namely "by securing fiduciary markers to an impression tray and making the impression of the patient's dentition using the impression tray". There was thus no contradiction within feature 1.2'' and it was clear that the fiduciary markers mentioned in the first part-sentence as well as in the following explanation were the same fiduciary markers, the amendment also clearly establishing the time sequence of the steps. It was also exactly these markers to which reference was made in features 1.3 and 1.4''. As feature 1.2'' already defined that the markers were secured to the tray and that the impression was made using the impression tray, there was no need to repeat this fact

over and over in the following claim features. In particular, there was no indication whatsoever - nor did it make any technical sense - that the markers might be removed from the tray and the impression. Analogously, feature 7.4'' of claim 7 clarified that the CT computer model and the digital dental computer model comprised digital markers corresponding to a plurality of fiduciary markers secured to an impression tray and positioned relative to the impression of the patient's dentition. There was thus no need to also state this fact in features 7.2 and 7.3''.

The claims were thus clear.

Auxiliary Request 12 - Article 123(2) EPC

Both independent claims comprised in features 1.2'' and 7.4'' the information that the fiduciary markers were secured to an impression tray and that the impression of the patient's dentition was made using this impression tray as disclosed in Figure 8.

In the original claim set, laser surface scanning had been claimed in a dependent claim and thus constituted only one option for generating the digital dental computer model of the patient's dentition. A scanner in general for obtaining a digital dental model was further disclosed on page 11, lines 3 to 5 as originally filed.

It was moreover clear from the application that the creation of a computerised composite skull model useful for diagnosis and treatment planning and a workstation suitable for that purpose constituted an invention of its own, there being thus no need to restrict the use of said invention to the fabrication of a surgical splint.

Lastly, the generation of a three-dimensional computed tomography computer model of bone structures including at least a portion of the patient's skull had been disclosed in claim 7 as filed - on which present claim 1 was based. Whether the digital dental model of the dentition was made from an impression or not did not influence this disclosure.

Consequently, Auxiliary Request 12 fulfilled the requirements of Article 123(2) EPC.

IX. The essential arguments of the respondent can be summarised as follows:

Main Request - Article 100(c) EPC

Claim 1 as granted comprised in feature 1.2 the step of positioning a plurality of fiduciary markers relative to an impression of the patient's dentition. This step required the impression to be there before positioning of the fiduciary markers. As the application as originally filed did not disclose taking the impression before positioning the markers, due to the amendment the skilled person was faced with new technical information. An analogous objection applied to claim 7 as filed. Article 100(c) EPC thus prejudiced the maintenance of the patent as granted.

Auxiliary Request 1 - Article 84 EPC

Compared with claim 1 as granted, features 1.2' and 1.4' had been amended. In accordance with G3/14 these features had to be examined for the requirements of

Article 84 EPC, which were, however, not fulfilled for several reasons:

Firstly, feature 1.2' mentioned an impression twice. The feature thus required the making of yet a further impression after the plurality of fiduciary markers having been positioned relative to a first impression. Due to this wording, it also remained unclear whether the impression(s) were to be made before positioning of the markers, after positioning of the markers, or both.

Secondly, feature 1.4' required the generation of a digital dental computer model of the impression. However, a model of the impression of the dentition was different from a model of the dentition itself, one being the negative, the other the positive. As the composite computer model required alignment of the positives, the claim was contradictory in that in feature of 1.4' only the negative was generated.

Thirdly, feature 1.4' was in contradiction with dependent claim 5 which further defined the digital dental model to be formed by laser surface scanning the patient's dentition. How could laser scanning of the dentition result in a model of an impression of the dentition?

At least for these reasons, claim 1 of Auxiliary Request 1 did not fulfil the requirements of Article 84 EPC and was therefore not allowable.

Auxiliary Request 12 - Admission into the proceedings

The submission of Auxiliary Request 12 during oral proceedings before the Board, i.e. at the very last moment of the proceedings, without any valid reason for

that delay should not be allowed. During opposition and opposition appeal proceedings the appellant had repeatedly submitted new requests, arbitrarily adding and removing particular features, the repeated submissions adding up to 20 or 30 different requests, which all had to be considered by the respondent and which by their sheer number had made the proceedings complex. Admitting even further requests, which changed the subject from what had been decided by the opposition division, was neither in accordance with the purpose of opposition appeal proceedings, namely to review the decision of the first instance, nor was it procedurally efficient, in that even a remittal might become necessary.

Furthermore the claims were *prima facie* neither in accordance with the requirements of Article 84 nor 123(2).

Auxiliary Request 12 - Article 84 EPC

The claims of Auxiliary Request 12 were unclear for several reasons: Firstly, feature 1.2'' mentioned fiduciary markers twice, it being unclear whether these were the same markers or different, additional markers. Secondly, feature 1.2'' was contradictory in itself, once stating that markers were positioned relative to an impression of the patient's dentition, the other time stating that the markers were secured to an impression tray. Thirdly, feature 1.2'' still did not clearly establish the time sequence of the different steps. Fourthly, features 1.3 and 1.4'' did not mention any tray. It was thus unclear whether the markers to be used for generating the respective models were the same markers as mentioned in 1.2'' and whether they were still connected to the tray. Equally, with respect to

claim 7, features 7.2 and 7.3'' allowed generation of the respective models without markers or a tray being required, these features being however essential for the invention.

Consequently, the requirements of Article 84 EPC were not met.

Auxiliary Request 12 - Article 123(2) EPC

The subject-matter of claims 1 and 7 of Auxiliary Request 12 had been amended beyond the disclosure of the application as originally filed. Although the generation of a digital dental computer model from the impression was disclosed in Figure 8 and on page 9 of the application as filed, this disclosure had been made in a particular context from which it could not be isolated without unallowable intermediate generalisation.

In particular, model generation from the impression was only disclosed for a dental impression made by use of an impression tray with fiduciary markers secured thereto and by then laser scanning the dental impression and the fiduciary markers. It, moreover, was only disclosed in the context of making a physical surgical splint. The tray with the markers secured thereto, the laser scanning and the making of the physical surgical splint were essential parts of the disclosure which could not be omitted. Still the respective model generation steps in claims 1 and 7 did not comprise the tray and the specific markers secured thereto. The claim thus still comprised the case of generating the models without the tray and the markers secured thereto. Splint making was completely omitted. Furthermore, feature 1.2'' still comprised the step of positioning a plurality of fiduciary markers relative to an impression although no

such active positioning step had been disclosed in the application as filed. Also, there was no disclosure of generating a three-dimensional computed tomography computer model including at least a portion of the patient's skull. Figure 8 only mentioned the creation of a model of the craniofacial skeleton.

Therefore, Auxiliary Request 12 did not fulfil the requirements of Article 123(2) EPC.

Reasons for the Decision

1. Main Request - Article 100(c) EPC

The only amendment in claim 1 as granted with respect to claim 7 as filed is in feature (1.2), leading to the replacement of:
"positioning a plurality of fiduciary markers relative to the patient's dentition"
with
"positioning a plurality of fiduciary markers (20) relative to an impression of the patient's dentition".

The latter wording allows that the impression already exists when the fiduciary markers are positioned, i.e. it comprises the case where the impression has been taken before the markers are positioned.

It is furthermore - although not disclosed - not illogical to first take an impression of the patient's dentition using an impression tray and then connect fiduciary markers to that tray and the impression therein only later - for example immediately before the tray is reinserted into the patient's mouth to serve as a reference in the CT scan. The Board notes that the appellant himself stated on page 6, lines 23 to 26 of

the statement setting out the grounds of appeal that "the invention would still work if the impression were made first, provided that the markers are positioned relative to the impression by the time the CT scan is made". The respective interpretation comprised by claim feature 1.2 thus would not be ruled out by the skilled person.

As correctly analysed by the opposition division this time sequence is different from what was disclosed in the application as filed.

According to p.6, l. 15-21 ("fiduciary markers may be inserted into the ...impression tray,....A triple-tray may be used to take simultaneous impressions..."), p. 9, 2nd para ("impressions of the dentition may be made....using an impression tray, with fiduciary markers secured to the tray") and Figure 8 ("make an impression tray with fiducial markers", then "make dental impressions for upper and lower teeth using impression tray"), the application discloses first positioning the markers on an impression tray, taking the impression only thereafter.

Therefore, the amendment in feature 1.2 results in the skilled person being confronted with new technical information which was not clearly and unambiguously disclosed in the application as filed.
Consequently, Article 100(c) EPC prejudices the maintenance of the patent as granted.

The further objections brought forward by the respondent will be dealt with below - if still relevant in the context of the respective auxiliary requests.

2. Auxiliary Request 1 - Article 84 EPC

With respect to feature 1.2' the Board notes that the two part-sentences after the word "by" are separated by a semicolon. Thus, even following the logic of the appellant, it is only the first of these part-sentences i.e. the part-sentence between the word "by" and the semicolon which can be seen as explaining how the result given in the first part of feature 1.2', i.e. the result of a plurality of fiduciary markers being positioned relative to an impression of the patient's dentition, is achieved. On the other hand, the following second and last part-sentence of feature 1.2', i.e. the part between the two semicolons has to be regarded as an independent method step. It is thus unclear whether that method step ("making an impression of the patient's dentition using the impression tray") refers to the impression mentioned before, or to a further impression yet to be made. It is further undefined and thus not clear whether that method step is to be performed before securing of the fiduciary markers to the impression tray or not.

Secondly, feature 1.5 of claim 1 defines the formation of a composite computer model by combining the computed tomography computer model of the patient's bone structure and the digital dental computer model of the patient's dentition, i.e. by combining 2 positives. Amended feature 1.4' of claim 1 on the contrary defines the generation of a digital dental computer model of the impression of the patient's dentition and the fiduciary markers, i.e. it defines the generation of a model of the negative. Even if both the positive and the negative digital computer models may comprise the same separating two-dimensional surface, there is a difference with respect to the side of the surface on which the solid material, i.e. the bone or the dentition on the one hand

and the plaster material on the other hand is located. Therefore, both models cannot be considered identical, the claim language thus being inconsistent and unclear.

Thirdly, laser surface scanning the patient's dentition cannot be used to generate a digital dental computer model of the impression of the patient's dentition and the fiduciary markers for the simple fact that the dentition itself neither comprises the impression nor the markers. Thus there is a contradiction between feature 1.4' and dependent claim 5, leading to a further unclarity.

Consequently, claim 1 of Auxiliary Request 1 does not fulfil the requirements of Article 84 EPC.

3. Auxiliary Request 12

3.1 Admission into the proceedings

Auxiliary Request 12 was filed during the oral proceedings before the Board. In accordance with Article 13(1) RPBA it may thus be admitted and considered at the Board's discretion. That discretion must be exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.

The respondent has argued that the repeated submission of subsequent different auxiliary requests had made the case very complex, such that no new request should be admitted. According to Article 13(1) RPBA it is however the complexity of the new subject-matter which is decisive.
In this context, the Board observes that Auxiliary Request 12 as filed during the oral proceedings is based

on Auxiliary Request 12 as filed with letter dated 15 January 2016. The amendments performed relative to the latter consist in adapting the language of dependent claim 5 to the language of feature 1.4'' (feature 1.4'' had already been present in the version of Auxiliary Request 12 filed 15 January 2016) and of a replacing the undefinite article "an" with the definite article "the" in feature 7.4'' (to take into account that "the impression of the patient's dentition" is first mentioned in feature 7.3). These amendments are of low complexity and the respondent can reasonably be expected to deal with them without adjournment of the oral proceedings. Thus also Article 13(3) RPBA is not a valid reason to object to the admission of the request.

It is further noted that Auxiliary Request 12 as filed with letter dated 15 January 2016 only differs from Auxiliary Request 12 as filed with the statement of grounds in that feature 1.2 had been replaced by a wording mentioned as being originally disclosed in point 3.2 last paragraph of the Board's summons (i.e. by the wording of feature 1.2''). Therefore, also this first amendment to Auxiliary Request 12 as filed with the statement of grounds was of low complexity and an appropriate reaction to the course of the proceedings.

Auxiliary Request 12 as filed with the statement of grounds aimed at overcoming the objections detailed in points 1.1, 1.2, 1.3, 1.4, 2.2, 3.1 and 3.3. of the opposition division's decision. It thus did not create a new case. On the contrary, the submission of this request has to be considered the normal behaviour of a losing party. The further amendments to this submission (dated 15 January 2016 and during oral proceedings before the Board) were proportionate reactions to the course of proceedings. They replaced other auxiliary

requests which in the light of the course of the proceedings had turned out to have a low chance of success and thus respected the need for procedural economy.

In trying to overcome all objections mentioned in the course of the proceedings by the Board as rendering the Main Request and Auxiliary Request 1 not allowable under Articles 123(2) and 84 EPC, the appellant could assume that the requirements of these articles were *prima facie* fulfilled.

At least for *prima facie* admissibility there is no obligation to address further objections raised by the respondent, but not mentioned by the Board among the objections rendering the Main request and Auxiliary Request 1 not allowable under Articles 123(2) and 84 EPC.

Auxiliary Request 12 was thus admitted.

3.2 Article 84 EPC

The objections brought forward by the respondent are not convincing for the following reasons:

Feature 1.2'' falls into two part-sentences separated by the word "by". In this way, the second part-sentence explains in more detail how the feature of the first part-sentence is effectuated. It is thus clear to the skilled person reading the claim that the fiduciary markers mentioned in the first part-sentence and in the second part-sentence are the same. The two part-sentences are also not in contradiction, but the latter merely explains the former. Furthermore, the second part-sentence again falls into two sub-part-sentences,

before and after the word "and". By use of the definite article "the" in the feature "the impression tray" within the second sub-part-sentence, it is also clear that "the impression tray" used for making the impression of the patient's dentition is exactly the impression tray to which the fiduciary markers are secured according to the first sub-part-sentence. Therefore, the time sequence is clearly established.

In features 1.3 and 1.4'' reference is made to exactly "the" fiduciary markers introduced in feature 1.2''. According to feature 1.2'' these fiduciary markers are secured to an impression tray and the impression is made using the impression tray. There is no reason why this fact would need to be stated again in features 1.3 and 1.4''. Assuming that the claim would include methods in which the markers were separated from the tray and thus from the impression when generating the respective models, thereby removing the reference required for aligning the models in order to form the composite computer model, is illogical and does not make technical sense. Such an interpretation will thus be ruled out by the skilled person reading the claim with a mind willing to understand.

Analogous reasoning applies to claim 7. According to feature 7.4'', the computer is for combining the respective models "by aligning digital markers corresponding to a plurality of fiduciary markers secured to an impression tray and positioned relative to the impression of the patient's dentition". It is thus implicitly clear to the skilled person that when generating the CT model and the digital dental computer model (from the impression), the impression, the impression tray and the fiduciary markers secured thereto had been present. In this context, the person

skilled in the art would rule out an interpretation of features 7.2 or 7.3'' in which the models were to be generated without fiduciary markers secured to an impression tray and positioned relative to the impression, i.e. an interpretation which does not make sense in the technical context of the claim as a whole.

The requirements of Article 84 EPC are thus met.

3.3 Article 123(2) EPC

Claim 1 of Auxiliary Request 12 is based on claim 7 as originally filed in combination with the disclosure on pages 6 and 9 and in Figure 8 of the original application. Claim 7 of Auxiliary Request 12 is based on claims 13 and 14 as filed and the above mentioned parts of the original application.

3.3.1 The respondent argued that, from this disclosure, the impression tray, the markers secured thereto, the laser surface scanning and the generation of a surgical splint, which were inextricably linked with that disclosure, had been omitted thus resulting in an unallowable intermediate generalization.

However, as explained above, the impression tray with the fiduciary markers secured thereto forms part of the subject-matter of the claims. Therefore, these features have not been omitted.

Furthermore, generation of a digital dental computer model by whatever technique was disclosed in claim 7 as originally filed. This requires the determination of a two-dimensional surface. Whether it is the two-dimensional surface of the positive, i.e. the dentition or the negative, i.e. the impression, does not impose a

limitation on the model generation technique to be used. There is thus no functional link between the model generation being restricted to generation "from the impression" and the use of laser surface scanning. Claiming model generation "from the impression" without restriction to the use of laser surface scanning thus does not constitute an unallowable intermediate generalization.

There is also no reason why the method would need to be restricted to physical splint creation. The very first paragraph of the description as filed states that the invention relates to methods to fabricate orthognathic surgical splints, and to a related technique for creating a computerized composite skull model useful for diagnosis and treatment planning. The creation of a computerized composite skull model is thus an independent aspect of the invention. Whether an impression is used for model creation in this context has no functional correlation with the later use of the model, be it for splint manufacturing or for diagnosis only. Even if disclosed in Figure 8 as part of the method, the splint creation step thus can be omitted without unallowable generalization from the model generation, which forms a full self-contained technical teaching of its own.

3.3.2 The respondent further objected that neither the step of active positioning of fiduciary markers relative to an impression was disclosed in the application as originally filed, nor was the creation of a composite model including at least a portion of the patient's skull.

It is true that Feature 1.2 as granted requires positioning a plurality of fiduciary markers relative to

an impression of the patient's dentition. This, however, may be realized either by actively positioning the markers relative to a pre-existing impression, or by first securing, i.e. positioning, the markers to an impression tray and making the impression of the patient's dentition using the impression tray. Also in the latter case, in the end, the plurality of fiduciary markers is positioned relative to an impression of the patient's dentition, which implies that the step of positioning a plurality of fiduciary markers relative to an impression of the patient's dentition is performed. Thus, by the amendment in feature 1.2'', the subject-matter of claim 1 has been effectively restricted to the second possibility, i.e. the active positioning of the fiduciary markers to a pre-existing impression is no more part of the subject-matter of claim 1 of Auxiliary Request 12. The respondent's objection that such an active positioning step present in claim 1 was not originally disclosed is thus moot.

The respondent further argued that the method disclosed in Figure 8 of the application as filed did not disclose creating a model including at least a portion of the patient's skull. Creating a model including at last a portion of the patient's skull was however disclosed in claim 7 as filed. Furthermore, Figure 8 explicitly mentions the creation of "a CT bone model of craniofacial skeleton with fiducial markers". The word "cranium" is Latin for skull. Figure 8 - as well as claim 7 as filed - thus disclose the creation of a model including at least a portion of the patient's skull.

3.3.3 To conclude, the amendments performed in Auxiliary Request 12 fulfil the requirements of Article 123(2) EPC.

3.4 Article 123(3) EPC

The respondent has not raised an objection under Article 123(3) EPC against Auxiliary Request 12 and also the Board sees no reason to do so *ex officio*.

As discussed in point 3.3.2. above, by the amendment in feature 1.2'' the subject-matter of claim 1 has been effectively restricted to the second possible interpretation of feature 1.2 of claim 1 as granted, thereby restricting the protection conferred by the European patent.

The requirements of Article 123(3) EPC are thus fulfilled.

3.5 The Board thus comes to the conclusion that the opposition ground under Article 100 (c) EPC does not prejudice the maintenance of the patent on the basis of the claims of Auxiliary Request 12 as submitted during oral proceedings. Furthermore the Board comes to the conclusion that the claims of said request fulfil the requirements of Articles 123(2), (3) and 84 EPC.

4. During opposition proceedings, only the opposition ground under Article 100(c) EPC has been dealt with so far. In the notice of opposition, further grounds under Articles 100 (a) and (b) EPC were invoked by the respondent. In accordance with the respondent's request and with Article 111(1) EPC, second sentence, the Board thus finds it appropriate to remit the case to the opposition division for further prosecution on the basis of Auxiliary Request 12.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Opposition Division for further prosecution on the basis of Auxiliary Request 12 as filed at the oral proceedings.

The Registrar: The Chairman:

C. Moser M. Alvazzi Delfrate

Decision electronically authenticated