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Datasheet for the decision of 2 July 2013

Case Number: T 1805/11 - 3.2.08

Application Number: 06014625.5

Publication Number: 1878404

IPC: A61C 13/00

Language of the proceedings: EN

Title of invention:
CAD system for assessing blank size

Patent Proprietor:
3M Innovative Properties Company

Opponent:
Sirona Dental Systems GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 56, 100(a), 114(1), 101(1)
EPC R. 99(2)
RPBA Art. 13(1)

Keyword:
"Admissibility of appeal (yes)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1805/11 - 3.2.08

D E C I S I O N
of the Technical Board of Appeal 3.2.08
of 2 July 2013

Appellant: (Opponent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 15 June 2011 rejecting the opposition filed against European patent No. 1878404 pursuant to Article 101(2) EPC.

Composition of the Board:

Chairman: T. Kriner
Members: M. Alvazzi Delfrate
D. T. Keeling

Summary of Facts and Submissions

I. By decision posted on 15 June 2011 the opposition division rejected the opposition against European patent No. 1 878 404.

II. The appellant (opponent) lodged an appeal against this decision on 15 August 2011, paying the appeal fee on the same day. The statement setting out the grounds for appeal was filed on 14 October 2011.

III. Oral proceedings before the Board of appeal were held on 2 July 2013.

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed and the patent be upheld as granted or in the alternative that the patent be maintained in accordance with the claims of one of auxiliary requests 1 to 3 filed with letter of 20 March 2013. Furthermore, the respondent requested the Board not to admit into the proceedings document E5 and the line of argumentation starting from document E2.

IV. Independent claims 1 and 10 as granted (main request) read as follows:

"1. A computer-readable medium having computer-readable instructions which implement the following procedures:

generating in a user interface a three dimensional graphical rendering of a dental restoration;

generating in the user interface a three dimensional graphical rendering of a three dimensional blank volume, the blank volume corresponding in dimensions to the useable portion of a blank that can be used for milling, wherein the graphical rendering of the three dimensional blank volume is overlaid upon the three dimensional graphical rendering of the dental restoration such that the three dimensional rendering of the dental restoration appears substantially inside of the three dimensional graphical rendering of the blank volume;

based on the three dimensional blank volume overlaid upon the three dimensional graphical rendering of the dental restoration, determining what portion of the area of the dental restoration extends beyond the boundary of the three dimensional blank volume; and,

presenting to a user via the user interface the graphical rendering of the three dimensional blank volume and the three dimensional graphical rendering of the dental restoration, wherein the portion of the three dimensional graphical rendering that extends beyond the boundary of the three dimensional blank volume has been assigned a visual indicia."

"10. A method comprising:

generating in a user interface a three dimensional graphical rendering of a dental restoration;

generating in the user interface a three dimensional graphical rendering of a three dimensional blank

volume, the blank volume corresponding in dimensions to the useable portion of a blank that can be used for milling, wherein the graphical rendering of the three dimensional blank volume is overlaid upon the three dimensional graphical rendering of the dental restoration such that the three dimensional rendering of the dental restoration appears substantially inside of the three dimensional graphical rendering of the blank volume;

based on the three dimensional blank volume overlaid upon the three dimensional graphical rendering of the dental restoration, determining what portion of the area of the dental restoration extends beyond the boundary of the three dimensional blank volume; and,

presenting to a user via the user interface the graphical rendering of the three dimensional blank volume and the three dimensional graphical rendering of the dental restoration, wherein the portion of the three dimensional graphical rendering that extends beyond the boundary of the three dimensional blank volume has been assigned a visual indicia."

V. Following documents played a role for the present decision:

E1: WO -A- 2005/007007;
E2: EP -A- 1 614 396; and
E5: Open GL Programming Guide Fifth Edition (2006).

VI. The appellant argued essentially as follows:

Admissibility of the appeal

The statement of grounds of appeal presented the case in a clear and understandable way. Moreover, the appeal number and the date of the contested decision indicated in that statement were correct, so that it could be assigned to the corresponding appeal. Therefore, the appeal was admissible.

Introduction of E5 into the proceedings

Document E5 had been filed as a reaction to the discussion during the oral proceedings before the opposition division concerning the importance of a graphical rendering of the dental restoration and the blank. Moreover, this document represented the common general knowledge of the person skilled in the art, because it was the programming guide of a widely used software. As it was also prima facie highly relevant, E5 was to be admitted into the proceedings.

Main request - Inventive step starting from E1

E1 represented the most relevant prior art. It disclosed a fully automatic method for selecting the blank to be used in the production of a dental restoration. However, this method required a library of many different blanks and did not allow the intervention of the dentist. Starting from E1 the object underlying the invention according to claim 1 consisted in reducing the number of blanks in the library and allowing an intervention of the dentist when the restoration was bigger than the blank.

This object was achieved by presenting to a user via a user interface a graphical rendering of a three dimensional blank volume and a three dimensional graphical rendering of the dental restoration, wherein the portion of the three dimensional graphical rendering that extended beyond the boundary of the three dimensional blank volume had been assigned visual indicia.

E2 also related to a computer-aided process for the production of a dental restoration. In this process it was possible for the dentist to intervene by moving the graphical rendering of the restoration within the graphical rendering of the blank. In this way the restoration was moved across the internal boundaries between the different zones of the blank, which were shown to the user in a user interface. Hence, E2 taught that the user could intervene in the software-assisted design of the restoration and that the graphical rendering of the restoration and the blank could be presented together to the user via a user interface showing the regions where a boundary was crossed. In the light of this teaching it was obvious to achieve the object of the invention in accordance with claim 1 of the main request. Therefore, the subject-matter of this claim did not involve an inventive step starting from E1.

Main request - Inventive step starting from E2

Moreover, the inventive step could also be assessed starting from E2 and combining it with E1 and the common general knowledge of the skilled practitioner, an alternative way of taking into account the

combination of documents E1 and E2. In this respect reference was made to the submissions in the written procedure.

According to these submissions the object underlying the invention, starting from E2, could be seen in the provision of a process for positioning the graphical rendering of the restoration in relation to the blank that allowed a visual examination of the regions extending beyond the boundaries of the blank.

This object was achieved by determining what portion of the area of the dental restoration extended beyond the boundary of the three dimensional blank volume based on the three dimensional blank volume overlaid upon the three dimensional graphical rendering of the dental restoration, wherein the portion of the three dimensional graphical rendering that extended beyond the boundary of the three dimensional blank volume had been assigned visual indicia.

E1 disclosed software which allowed examining whether the restoration extended beyond the blank boundary. The teaching of this document left open the choice to make that examination on a graphical user interface, a possibility known to the person skilled in the art from his common general knowledge.

Therefore, it was obvious to achieve the object above according to claim 1 of the main request. Accordingly, its subject-matter did not involve an inventive step starting from E2 either.

VII. The respondent argued essentially as follows:

Admissibility of the appeal

The patent and application numbers indicated in the statement of grounds of appeal were wrong. Moreover, the patent proprietor was designated as opponent and vice versa. Hence, the Board and the patent proprietor were left with the burden to make investigations about the correct assignment of the statement of grounds. Moreover, the arguments provided in that statement were vague. Therefore, that statement did not enable immediate understanding of the basis on which the appeal was based on and the appeal should be rejected as inadmissible.

Introduction of E5 into the proceedings

E5 was not filed with the statement of grounds but at a later stage. There was no reason for this delay. Moreover, this document, which did not represent the common general knowledge of the person skilled in the art, was not prima facie highly relevant. Therefore, it should not be admitted into the proceedings.

Inventive step starting from E1

Starting from E1, there was no reason to allow an intervention of the dentist when the restoration was bigger than the blank, since the process of E1 was a fully automated one.

Even considering the object to allow such intervention, there was no reason to take into account the teaching

of E2, according to which the dental restoration was entirely inside the blank.

In any event, the combination of E1 and E2 did not lead to the claimed invention, since none of these documents disclosed the presentation to a user via a user interface of the graphical rendering of the three dimensional blank volume and of the three dimensional graphical rendering of the dental restoration, wherein the portion of the three dimensional graphical rendering that extended beyond the boundary of the three dimensional blank volume had been assigned visual indicia.

Therefore, the subject-matter of claims 1 and 10 involved an inventive step starting from E1.

Inventive step starting from E2

The line of attack starting from E2 was an amendment to the appellant's case after having filed the statement of grounds of appeal which should not be admitted into the proceedings.

In any event, also this line of attack could not lead to the claimed invention without an ex post facto analysis. Therefore, the claimed subject-matter involved an inventive step also starting from E2.

Reasons for the Decision

1. Admissibility of the appeal

According to Rule 99(2) EPC the statement of grounds of appeal must indicate the reasons for setting aside the decision impugned, or the extent to which it is to be amended, and the facts and evidence on which the appeal is based. If this requirement is not complied with the appeal must be rejected as inadmissible (Rule 101 (1) EPC).

In the present case the statement of grounds of appeal presents the case of the appellant in an understandable way, indicating the issues where the decision under appeal is, in the appellant's view, incorrect and explaining how this would lead to the revocation of the patent in suit. The respondent's submission that the arguments on which that case was based are vague cannot convince to the contrary, since it fails to identify in which respect those arguments are vague.

Nor is the fact that the statement of grounds carries the wrong patent and application number and that the patent proprietor had been designated as opponent and vice versa detrimental to the admissibility of the appeal, since the indication of the correct appeal number, which is consistent with the date of the decision under appeal indicated and the arguments put forward in that statement, is sufficient to identify the case to which the statement of grounds belongs.

Therefore, the appeal is admissible.

2. Introduction of E5 into the proceedings

E5 was not submitted in due time, since it was filed with letter of 7 January 2013. Therefore, it lies within the discretionary power of the Board to consider it or not (see Article 114(2) EPC and Article 13(1) RPBA, OJ EPO 11/2007, page 536).

In the present case there is no valid reason for the delay in the submission of this document, which was cited in the patent in suit (see paragraph [0015]) and thus known to the appellant long before its submission. Even considering it as a reaction to the discussion during the oral proceedings before the opposition division, could not justify that delay, because E5 was not filed together with the statement of grounds of appeal but only after the summons to the oral proceedings.

Moreover, E5, which is a user manual of a specific although possibly widely used software, cannot be considered to represent the common general knowledge of the person skilled in the art, and it is not prima facie more relevant than the documents already on file, in particular since it does not specifically relate to the production of dental restorations.

Under these circumstances the Board decided not to admit E5 into the proceedings.

3. Main request - Inventive step starting from E1

3.1 E1 relates to a process for preparing dental restorations by using a mill blank in a shape that has

been predetermined to reduce material waste when the mill blank is machined into the final part (see paragraph [10]). To this purpose it uses an algorithm on a computer-readable medium having computer-readable instructions for selecting in a library of blanks the blank that is "closest" to the restoration being designed (see paragraphs [50] and [52]).

The algorithm generates a closed parameterised surface describing a dental restoration (see page 14, lines 16 to 19) and, for each blank in the library, a closed parameterised surface describing a three dimensional blank volume, the blank volume corresponding in dimensions to the useable portion of a blank that can be used for milling (see page 14, lines 20 to 22). To select the blank "closest" to the restoration the closed parameterised surface describing the three dimensional blank volume is overlaid upon the closed parameterised surface describing the dental restoration, such that the closed parameterised surface describing the dental restoration appears substantially inside of the three dimensional graphical rendering of the blank volume, based on the three dimensional blank volume overlaid upon the three dimensional graphical rendering of the dental restoration, determining whether or not a portion of the area of the dental restoration extends beyond the boundary of the three dimensional blank volume to determine a subset of blanks containing the dental restoration among which the "closest" blank is successively selected (see page 14, line 22 to page 15, line 4 and Figure 4).

3.2 E1 does not disclose the features of claim 1 of the main request concerning the presentation to a user via

a user interface of a graphical rendering of the three dimensional blank volume and a three dimensional graphical rendering of the dental restoration, wherein the portion of the three dimensional graphical rendering that extends beyond the boundary of the three dimensional blank volume has been assigned visual indicia.

By means of these distinguishing features more design flexibility is achieved, as the user may adapt various parameters to have the restoration fit into the blank (see paragraphs [0006] and [0037] to [0039] of the patent in suit).

3.3 Starting from E1, which teaches a fully automated process for the selection of the blank, it was not obvious to provide these distinguishing features, which involve an interaction with the user. The object formulated by the appellant, which comprises an intervention of the dentist when the restoration is bigger than the blank, is at odds with the teaching of E1 and can only be the result of an ex post facto analysis of the claimed invention.

3.4 Moreover, even considering that object, the prior art, in particular E2, does not teach the attainment of it in accordance with claim 1.

E2 deals with the object of allowing more freedom in the production of dental restorations (see paragraph [0004]). To that end it uses a representation of the restoration superposed on the blank (see for instance Figure 1 and 2). However, contrary to present claim 1 it does not foresee that a portion of the three

dimensional graphical rendering of the dental restoration may extend beyond the boundary of the three dimensional blank volume. Rather, in the preferred embodiment instructions in this sense are ignored and a warning signal is given (see paragraphs [0028] and [0029]).

Therefore, starting from E1 the prior art does not hint at a computer-readable medium having computer-readable instructions in accordance with claim 1 as granted. The same applies, for analogous reasons, to the method of claim 10.

4. Main request - Inventive step starting from E2

In its letter of 7 January 2013 the appellant argued that the claimed invention lacks an inventive step starting from E2. Since the line of attack put forward in the statement of grounds of appeal started from E1 as the most relevant prior art, the line of attack starting from E2 represents an amendment to the appellant's case after it filed its grounds of appeal.

Accordingly, it may be admitted and considered at the Board's discretion. This discretion shall 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 (see Article 13(1) RPBA, OJ EPO 2007, 536).

In the present case, this new line of attack was submitted well in advance of the oral proceedings and relies, as a starting point for the assessment of

inventive step, on one of the only two prior art documents submitted with the statement of grounds.

Under these circumstances the Board decided to admit it into the proceedings.

4.1 E2 does not disclose that the dental restoration may extend beyond the boundaries of the blank. On the contrary, it discloses in the preferred embodiments measures that avoid this possibility (see paragraphs [0014] and [0029]). Hence, starting from E2 it was not obvious for the person skilled in the art, without the benefit of hindsight knowledge of the claimed invention, to provide a process which allows a visual examination of the regions extending beyond the boundaries of the blank.

Moreover, E1 does not provide any teaching to be taken into consideration for this purpose, since it does not disclose a visual representation of the dental restoration or of the blank.

Accordingly, it was not obvious to arrive at the inventions claimed in claims 1 or 10 starting from E2 either.

Therefore, the subject-matter of these claims involves an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

V. Commare T. Kriner