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**Datasheet for the decision
of 26 August 2025**

Case Number: T 0366/24 - 3.5.07

Application Number: 17702557.4

Publication Number: 3574419

IPC: G06F17/50, G06T19/00

Language of the proceedings: EN

Title of invention:

Method and system for multiple views computer-aided-design including propagation of edit operations across views while ensuring constraints consistency

Applicant:

Siemens Industry Software Inc.

Headword:

Propagation of edit operations across views in CAD/SIEMENS
INDUSTRY SOFTWARE

Relevant legal provisions:

EPC Art. 84

RPBA 2020 Art. 12(4), 12(6)

Keyword:

Claims - clarity - main request (no)

Amendment to appeal case - amendment to patent application -
first to fourth auxiliary requests - taken into account (no) -
fourth auxiliary request - amendment gives rise to new
objections (yes)



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Case Number: T 0366/24 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 26 August 2025

Appellant:
(Applicant)

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted on 30 October 2023
refusing European patent application
No. 17702557.4 pursuant to Article 97(2) EPC**

Composition of the Board:

Chair

M. Jaedicke

Members:

P. San-Bento Furtado

B. Müller

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse European patent application No. 17702557.4 for lack of inventive step of the subject-matter of claim 1 of the main request over a general purpose computer and of the subject-matter of claim 1 of the first and second auxiliary requests over a well-known computer-aided manufacturing (CAM) system.
- II. The refused main request was filed with the letter of 24 July 2023. The refused first and second auxiliary requests were filed at the oral proceedings on 27 September 2023 to replace the auxiliary requests that had been filed with the letter of 24 July 2023.
- III. In its statement of grounds of appeal, the appellant filed a main request, which introduces a minor correction to the refused main request, and new first to fourth auxiliary requests. The first auxiliary request introduces an amendment to the refused main request. The second auxiliary request adds one feature in claim 1, and claims 7 and 8, to the refused first auxiliary request. It adds claims 7 and 8 to the first auxiliary request of 24 July 2023. The third and fourth auxiliary requests introduce further amendments based on a dependent claim and features taken from the description, respectively.
- IV. In its statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or one of the first to fourth auxiliary requests filed with the grounds of appeal. The appellant further requested that the four auxiliary

requests be admitted into the appeal proceedings. The appellant also requested that the board allow a correction under Rule 139 EPC to the wording of claim 8 of the main request and first auxiliary request, claim 7 of the second and fourth auxiliary requests and claim 6 of the third auxiliary request to correct the spelling of "includeing" to "including" in the first line of the claim.

- V. In a communication accompanying a summons to oral proceedings, the Board accepted the correction under Rule 139 EPC and expressed as its preliminary opinion that the subject-matter of claim 1 of the main request lacked both clarity and support by the description and was not inventive over a well known prior-art system for computer-aided design and manufacturing (CAD/CAM). The first to fourth auxiliary requests appeared to be inadmissible under Article 12(4) and (6) RPBA.
- VI. The appellant informed the board that it had decided not to attend oral proceedings and that it withdrew its request for oral proceedings. The board cancelled the oral proceedings.
- VII. The appellant's final requests were thus that the contested decision be set aside and that a patent be granted on the basis of the main request or one of the first to fourth auxiliary requests filed with the grounds of appeal (see also section IV. above).
- VIII. Claim 1 of the main request reads as follows (itemisation of the claim features has been added by the board):
- (a) A method of modifying a computer aided design (CAD) system model for part manufacture, the method performed on a data processing system; the method comprising:

- (b) receiving a dataset of co-ordinates representing an article in 2-dimensions, or representing an associated article in 3-dimensions;
- (c) receiving 2D constraints for the article and 3D constraints for the associated article to be applied to any changes to the dataset of co-ordinates for the article or the associated article;
- (d) receiving a modification to be applied to either the dataset of the article or to the dataset of the associated article;
- (e) combining the relevant 2D and 3D constraints with the modification to produce a constrained modification for each of the article and associated article;
- (f) solving the constrained modification in 2-dimensions and in 3-dimensions, to determine whether a solution exists in which all constraints are met;
- (g) if the solve is successful, simultaneously applying the constrained modification to each dataset using a transform applying the same relative change to the co-ordinates of each of the article and the associated article simultaneously; and,
- (h) storing updated datasets for the article and for the associated article; or,
- (i) if the solve fails, reducing the constraints and returning to the solve step, or terminating the process."

IX. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that text (a) has been amended as follows:

"A method of modifying, for part manufacture, a computer aided design (CAD) system model, the method performed on a data processing system; the method comprising:".

- X. Claim 1 of the second auxiliary request differs from claim 1 of the main request in that text (a) above has been replaced with the following text:

"A method of manufacturing a part comprising:
a method of modifying a computer aided design (CAD) system model of the part, the method performed on a data processing system and comprising:"

and in that text (h) has been replaced with the following text:

"storing updated datasets for the article and for the associated article and inputting the stored updated dataset for the associated article to a computer controlled machine and replicating the associated article in a sheet of material using the computer controlled machine; or,".

- XI. Claim 1 of the third auxiliary request adds the following text after text (a) of claim 1 of the second auxiliary request:

", wherein the dataset of co-ordinates representing an associated article in 3-dimensions is generated by scanning a manufactured part;"

- XII. Claim 1 of the fourth auxiliary request differs from claim 1 of the main request in that text (a) and (b) has been replaced with the following text

"A method of manufacturing a part, the method comprising modifying a computer aided design (CAD) system model for part manufacture, the method performed on a data processing system; the method comprising:

receiving a dataset of co-ordinates representing an article in 2-dimensions, a sheet material, or representing an associated article in 3-dimensions, the sheet material after it has been subjected to a bend;"

and in that the conjunction "and" has been deleted at the end of text (g) and text (h) has been replaced with the following text:

"storing updated datasets for the article and for the associated article, and inputting the stored updated dataset for the associated article to a computer controlled machine and replicating the associated article in a sheet of material using the computer controlled machine;

if the outcome of the solve does not meet certain predetermined requirements for the sheet material to be processed during manufacturing, then the modification is not applied; or,".

Reasons for the Decision

Invention

1. The invention concerns the problem of modifying a computer aided design (CAD) system model in a modelling system, the model including a representation of an article in two dimensions (2D article) and a representation of an associated article in three dimensions (3D associated article) (see original description, page 1, lines 12 and 13; page 6, lines 30 to 33). The 2D article may be a sheet material in flat space and the 3D associated article may be the sheet

material after it has been bent (page 7, lines 5 to 11, Figures 2 and 4, Figures 6a and 6b).

2. The purpose of the invention is to avoid that modifications to the design in one format (e.g. in the 3D design) have an unexpected or undesirable effect on the design in the other format (e.g. in the 2D design), in particular when determining production line processes, such as cutting and assembling sheet metal or other parts which may be bent into shape (page 6, lines 10 to 16). For example, it is desirable that a change in a bent form maintains segments of a circle on each side of the bend so that a single simple circle may be cut or punched in the flat, rather than there being discontinuities created, which are harder to deal with in the manufacturing process (page 11, lines 24 to 28, Figures 12a and 12b).
3. In order to achieve this purpose, the system according to the invention supports 2D constraints (e.g. keeping a circle) for the article and 3D constraints for the associated article to be applied to any changes to the model for the article or the associated article. When a modification to be applied to either the 2D article or to the 3D associated article is received, the relevant 2D and 3D constraints are combined with the modification to produce a "constrained modification" for each of the article and associated article (page 1, lines 19 to 32).

Correction under Rule 139 EPC

4. The correction of the word "includeing" to "including" in the above mentioned claims (see point IV above) is allowed as the error is obvious within the meaning of Rule 139 EPC, second sentence.

Main request

5. *Clarity - claim 1*

5.1 Claim 1 does not specify how the "article in 2-dimensions" relates to the "associated article in 3-dimensions". Even though claim 1 refers to the article in 3-dimensions as being "associated" with the article in 2-dimensions, it does not specify what being "associated" means. The claim covers any combination of an article in 2-dimensions and an associated article in 3-dimensions. In view of this, it is unclear how the article in 3-dimensions is associated with, or relates to, the article in 2-dimensions and it is unclear what the method achieves (Article 84 EPC).

5.2 It is unclear what the "updated datasets" of step (h) are. The claim does not clearly specify any relationship between these "updated datasets" and other features of the claim (Article 84 EPC).

5.3 Therefore, the main request does not satisfy the requirements of Article 84 EPC.

First auxiliary request

6. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that feature (a) has been replaced with the following feature (amendment underlined by the board):

(a1) A method of modifying, for part manufacture, a computer aided design (CAD) system model, the method performed on a data processing system; the method comprising:"

7. *Admittance*

7.1 In its statement of grounds of appeal, the appellant argued that the first auxiliary request introduced only a minor grammatical correction. The amendment dealt directly with the issues raised in point 2.4.3 of the decision under appeal regarding the word "for". By clarifying that the expression "for part manufacture" related to the modification of the model, rather than the model itself, a clear link to a real world technical effect was recited in the claim, thus fulfilling the requirements set out by decision G 1/19. The appellant requested that the first auxiliary request be admitted into the proceedings under Article 12(1)(b) RPBA.

7.2 The board notes that Article 12(1)(b) RPBA is not about the requests submitted with the grounds of appeal and their admissibility, but about the reasoning given in the statement of grounds of appeal.

Article 12(2) RPBA stipulates that a party's appeal case shall be directed to the requests, facts, objections, arguments and evidence on which the decision under appeal was based. New requests submitted with the statement of grounds of appeal are not mentioned in Article 12(2) RPBA.

According to Article 12(4) RPBA, any part of a party's appeal case which does not meet the requirements of Article 12(2) RPBA is to be regarded as an amendment. Any amendment to an appellant's case may be admitted only at the board's discretion, and the appellant is to provide reasons for submitting amendments in the appeal proceedings, including reasons why the amendments had not been filed earlier.

- 7.3 The board further notes that according to Article 12(6) RPBA, the board shall not admit requests which should have been submitted, or which were no longer maintained, in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.
- 7.4 The first auxiliary request was not dealt with in the decision under appeal, introduces an amendment which changes the claimed subject-matter, and is thus an amendment to the appellant's case within the meaning of Article 12(4) RPBA. Such a request may be admitted only at the board's discretion.
- 7.5 The appellant has not provided any reasons why the first auxiliary request could not have been filed earlier, but argued that the amendment dealt directly with the issues raised in point 2.4.3 of the decision under appeal regarding the word "for".
- 7.6 The board notes that point 2.4.3 of the decision under appeal, which the appellant cited as the reason for the amendment, is identical to point 2.4.3 of the minutes of the telephone interview of 21 September 2023 sent out before the oral proceedings on 27 September 2023. In particular, in point 2.4.3 of the minutes of the telephone interview the examining division argued that the mere presence of the expression "for part manufacture" in the preamble of the claim did not impact the examining division's analysis with regard to technicality. From the text "A method of modifying a computer aided design (CAD) system model for part manufacture" of the preamble of the claim, the reader understood that the expression "for part manufacture" referred to the closest noun preceding the expression, i.e. to the "CAD system model". The expression "CAD model for part manufacture" had to be construed as

meaning merely that the CAD model was suitable for part manufacture. Consequently, the expression "for part manufacture" did not limit the scope of the method claimed by implying a step of manufacturing, but, at best, implied some unspecified limitations to the CAD model manipulated.

7.7 In reply to this reasoning provided in the minutes of the telephone interview in advance of the oral proceedings, and before or during the oral proceedings before the examining division, the appellant could have submitted the amendment now introduced with the first auxiliary request. For example, such a request could have been submitted together with one of the auxiliary requests that the appellant filed during the first-instance oral proceedings. The first auxiliary request should thus have been filed earlier (Article 12(6) RPBA).

7.8 The board further notes that the first auxiliary request *prima facie* infringes Article 84 EPC for the reasons given above for the main request.

7.9 Taking the above into account, the first auxiliary request is not admitted into the proceedings (Articles 12(4) and (6) RPBA).

Second and third auxiliary requests

8. Claim 1 of the second auxiliary request differs from claim 1 of the main request in that feature (a) has been amended to the following feature (amendments underlined by the board)

(a2) A method of manufacturing a part comprising: a method of modifying a computer aided design (CAD) system model of the part, the method performed on a data processing system and comprising:

and in that the following feature has been added at the end of feature (h)

(h.1) and inputting the stored updated dataset for the associated article to a computer controlled machine and

(h.2) replicating the associated article in a sheet of material using the computer controlled machine.

8.1 Compared to the refused first auxiliary request, the second auxiliary request adds feature (i) at the end of claim 1 and adds independent claims 7 and 8 directed to a data processing system and a non-transitory computer-readable medium.

8.2 The appellant submitted that the second auxiliary request was based on the first auxiliary request filed in advance of the oral proceedings on 27 July 2023 (since there is no request with this date, the board assumes that the appellant meant 24 July 2023) with additional amendments to claims 7 and 8. Indeed, claim 1 of the second auxiliary request corresponds to claim 1 of the first auxiliary request of 24 July 2023 and the last two claims 7 and 8 correspond to claims 8 and 9 of the first auxiliary request of 24 July 2023 with the additional features "a method of manufacturing a part", (h.1) and (h.2).

9. Claim 1 of the third auxiliary request differs from claim 1 of the second auxiliary request in that the following feature of dependent claim 4 has been added after feature (b):

(b.1) wherein the dataset of co-ordinates representing an associated article in 3-dimensions is generated by scanning a manufactured part.

In addition, dependent claim 4 has been deleted, claims 5 to 8 have been renumbered and amendments corresponding to feature (b.1) were made to independent claims 7 and 8 of the second auxiliary request (i.e. claims 6 and 7 of the third auxiliary request).

- 9.1 Claim 1 of the third auxiliary request adds features (i) and (b.1) to claim 1 of the refused first auxiliary request.
10. *Admittance - second and third auxiliary requests*
- 10.1 In its statement of grounds of appeal the appellant requested that the second and third auxiliary requests be admitted into the proceedings in accordance with Article 12(1)(b) RPBA. The appellant argued that the second auxiliary request should be admitted under Article 12(1)(b) RPBA because it pertained directly to the appealed decision.
- 10.2 As explained above, Article 12(1)(b) RPBA is not about the requests submitted with the grounds of appeal or their admissibility. The second and third auxiliary requests change the subject-matter claimed when compared to any of the requests dealt with by the decision under appeal (see also points 8.1 and 9.1 above) and are thus amendments to the appellant's case within the meaning of Article 12(4) RPBA. Such a request may be admitted only at the board's discretion.
- 10.3 The appellant indicated the amendments introduced by the second auxiliary request compared to the first auxiliary request of 24 July 2023 (see also point 8.2 above) and argued that the second auxiliary request fulfilled the requirements of Article 123(2) EPC and

Rule 137(4) EPC. The amendments were based on claim 7 as originally filed.

- 10.3.1 Even though Rule 137(4) EPC does not apply to the appeal proceedings, similar requirements apply, as established by Article 12(4), second paragraph, RPBA.
- 10.3.2 Regarding the second auxiliary request, claim 1 corresponds to claim 1 of the first auxiliary request of 24 July 2023, which was no longer maintained at the oral proceedings before the examining division. These two requests are not identical, but the second auxiliary request introduces only amendments to claims 7 and 8, which are unrelated to the objections dealt with at the oral proceedings and in the decision under appeal. The second auxiliary request is thus to be considered a request which was "no longer maintained in the proceedings leading to the decision under appeal" within the meaning of Article 12(6) RPBA.
- 10.3.3 Furthermore, for the reasons given in point 11. below, the second auxiliary request *prima facie* does not fulfil the requirements of Article 84 EPC.
- 10.3.4 Taking the above into account, the board does not admit the second auxiliary request into the appeal proceedings (Article 12(4) and (6) RPBA).
- 10.4 The appellant argued that, mindful of decision G 1/19, points 84 to 88, the feature introduced by the third auxiliary request provided claim 1 with an undeniable technical character as it introduced a step of obtaining input from a real world physical object.
 - 10.4.1 The board notes, however, that this amendment could and should have been submitted earlier, since the problem of technical contribution in light of G 1/19 was raised

during the examination proceedings, for instance in the communication accompanying the summons to oral proceedings.

10.4.2 Furthermore, as explained in point 11. below, the addition of feature (b.1) by claim 1 of the third auxiliary request does not overcome all the *prima facie* objections for lack of clarity.

10.4.3 The third auxiliary request is thus not admitted into the appeal proceedings (Article 12(4) and (6) RPBA).

11. *Prima facie* clarity - claim 1 of the second and third auxiliary requests

11.1 Compared to claim 1 of the main request, claim 1 of the second auxiliary request specifies in feature (a2) that a part is manufactured and that the modified model is a model of the part to be manufactured. It also specifies in feature (h.1) that updated datasets are entered to a computer controlled machine and in feature (h.2) that the associated article is replicated using the computer controlled machine.

11.2 However, the claim still does not clearly specify how the article in 2-dimensions relates to the associated article in 3-dimensions. Furthermore, it is not clear from the claim whether the step of replicating the associated article corresponds to the manufacturing of the part and how the updated datasets for the article and the associated article relate to the modification of the CAD model of the part.

11.3 The feature added by claim 1 of the third auxiliary request specifies that the dataset of co-ordinates representing an associated article in 3-dimensions is generated by scanning a manufactured part. This still

does not explain how the 2-dimensions article relates to the associated article. This "manufactured part" is not related to the part to be manufactured mentioned at the beginning of the claim. The amendment introduced by the third auxiliary request thus *prima facie* does not solve the issue mentioned in point 11.2 above.

11.4 Therefore, claim 1 of the second and third auxiliary requests *prima facie* do not fulfil the requirements of Article 84 EPC.

Fourth auxiliary request

12. Claim 1 of the fourth auxiliary request differs from claim 1 of the main request in that features (a) and (b) have been amended as follows (amended features underlined by the board):

(a4) A method of manufacturing a part, the method comprising modifying a computer aided design (CAD) system model for part manufacture, the method performed on a data processing system; the method comprising:

(b4) receiving a dataset of co-ordinates representing an article in 2-dimensions, a sheet material, or representing an associated article in 3-dimensions, the sheet material after it has been subjected to a bend;

feature (h.1) has been added to feature (h) and the following feature has been added after feature (h.1) as an alternative to (i):

(j) if the outcome of the solve does not meet certain predetermined requirements for the sheet material to be processed during manufacturing, then the modification is not applied.

12.1 The appellant submitted that the fourth auxiliary request introduced amendments based on the embodiment of page 12, line 29, to page 13, line 31 and Figure 16.

13. *Admittance - fourth auxiliary request*

13.1 The appellant argued that the amendments could be clearly and unambiguously derived from the passages of the application as filed cited under point 12.1 above. With regard to allowability, the appellant referred to the inventive-step reasoning given in the statement of grounds of appeal for the second auxiliary request and added the following: "the clarification of the article and associated article deal with the point raised by the Examining Division at point 3.5.2 of the Decision". The appellant referred to the reasoning given for the second auxiliary request.

13.2 In its communication accompanying the summons to oral proceedings, the examining division had already indicated that one of the problems in recognising a technical effect was that the claim was not limited to a flat sheet, bending or folding (see point 2.20 of the cited communication). The amendments introduced by claim 1 of the fourth auxiliary request thus could and should have been submitted earlier (Article 12(6) RPBA).

13.3 Furthermore, the amendments based on an embodiment taken from the description raise new issues under added subject-matter at a late stage of the proceedings, which is detrimental to procedural economy.

13.4 Claim 1 of the fourth auxiliary request *prima facie* does not adequately describe the subject-matter

disclosed on page 13, lines 12 to 22, and Figure 16, which is the alleged basis for the amendments.

- 13.4.1 By omitting the "and" after step (g), claim 1 now specifies a method in which the step of storing the updated datasets is performed independently of whether the solve in step (g) was successful or not. This *prima facie* goes against the disclosure on page 13, lines 20 to 22 and Figure 16.
- 13.4.2 The only embodiment including feature (j) is described on page 13, lines 12 to 22, which includes the following passage "If the outcome of the solve 128 does not meet certain predetermined requirements ..., then that modification is not applied. Optionally, if the solve fails, the system may be set up with limits to allow it to automatically reduce some of the constraints and return to the solve step. Otherwise, the process is terminated 129." The skilled person understands from this passage that the automatic reduction of constraints, if it occurs, is restricted to some constraints according to limits set up by the system, and that returning to the solve step depends on whether it is possible to automatically reduce the constraints within the limits imposed by the system. However, this is not reflected in claim 1 of the fourth auxiliary request.
- 13.4.3 Therefore, claim 1 *prima facie* infringes Article 123(2) EPC.
- 13.5 For these reasons, the fourth auxiliary request is not admitted into the proceedings (Article 12(4) and (6) RPBA).

14. *Conclusion*

15. Since the only admitted request is not allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



S. Lichtenvort

M. Jaedicke

Decision electronically authenticated