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**Datasheet for the decision
of 15 March 2023**

Case Number: T 2055/20 - 3.2.03

Application Number: 11752232.6

Publication Number: 2440387

IPC: B22F3/00, B29D28/00,
B29C64/153, B29C64/20,
B29L31/00

Language of the proceedings: EN

Title of invention:

METHOD OF MANUFACTURING A THREE-DIMENSIONAL OBJECT HAVING AN
INTERNAL STRUCTURE

Patent Proprietor:

EOS GmbH Electro Optical Systems

Opponent:

ARCAM AB

Headword:

Relevant legal provisions:

EPC Art. 54(1)

RPBA 2020 Art. 12(2), 12(4), 12(6), 13(2)

Keyword:

Novelty - (yes)

Late-filed request - error in use of discretion at first instance (yes)

Amendment after summons - exceptional circumstances (no)

Decisions cited:

G 0007/93, G 0010/91, T 1852/11, T 1201/14, T 1525/17,

T 1425/16, T 0110/18, T 0544/12

Catchword:



Beschwerdekammern

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Case Number: T 2055/20 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 15 March 2023

Appellant: EOS GmbH Electro Optical Systems
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
12 October 2020 concerning maintenance of the
European Patent No. 2440387 in amended form.**

Composition of the Board:

Chair N. Obrovski
Members: G. Patton
R. Baltanás y Jorge

Summary of Facts and Submissions

- I. European patent No. EP 2 440 387 B1 ("the patent") relates to a method of manufacturing a three-dimensional object of a building material by an additive layerwise building method.
- II. The opposition was against the patent as a whole. Initially, only the ground for opposition of lack of inventive step in accordance with Article 100(a) EPC in combination with Article 56 EPC was substantiated.

The opposition division came, *inter alia*, to the following conclusions:

- the late-raised ground for opposition based on lack of novelty (Article 100(a) EPC in combination with Article 54 EPC) as well as the late-filed document D4 were admitted into the proceedings;
- the subject-matter of claim 1 of the then main request (patent as granted) was novel over D1 and D4, but lacked inventive step in view of D1 in combination with the skilled person's common general knowledge;
- the then auxiliary request 1 filed during the oral proceedings was not admitted into the proceedings as it did not overcome, *prima facie*, the objection of lack of inventive step; and
- the then auxiliary request 2 filed during the oral proceedings was admitted into the proceedings and fulfilled the requirements of the EPC.

The patent proprietor lodged an appeal against the opposition division's decision to maintain the patent in amended form on the basis of the then auxiliary request 2.

III. The board provided its preliminary, non-binding opinion to the parties in a communication dated 29 September 2022 pursuant to Article 15(1) RPBA 2020, which was annexed to the summons to oral proceedings.

IV. At the end of the oral proceedings held on 15 March 2023, the patent proprietor ("appellant") withdrew its main request (patent as granted) and requested

that the decision be set aside and
that the patent be maintained in amended form on the basis of the set of claims filed as auxiliary request 1 with the statement setting out the grounds of appeal,
or, in the alternative,
that the patent be maintained in amended form on the basis of one of the sets of claims filed as auxiliary requests 2 to 5 with the statement setting out the grounds of appeal.

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

V. Claim 1 of auxiliary request 1 reads as follows, with the feature lettering used by the parties (the amendments with respect to claim 1 of the patent as granted are shown in bold):

- a) Method of manufacturing a three-dimensional object (1) of a building material by an additive layerwise building method, wherein
- b) based on material parameters of the building material and predetermined characteristics of the object to be manufactured,

- c) an internal structure (11, 12, 13) of the object (1) including a grid structure is calculated, and
- d) the three-dimensional object (1) having this internal structure (11, 12, 13) is manufactured by the additive layerwise building method, so that it comprises the predetermined characteristics, wherein
- e') an object (1) having several areas of different mechanical characteristics, **implemented by grid structures** is created,

characterized in that

- f') the **grid structures in said** areas continuously merge into each other.

The wording of independent claim 1 of each the other auxiliary requests is irrelevant to the present decision.

VI. The following documents considered in the opposition proceedings are relevant to the present decision:

D1: US 6 630 093 B1

D4: F. P. W. Melchels et al., "Mathematically defined tissue engineering scaffold architectures prepared by stereolithography", Biomaterials 31 (2010), 6909-6916, available online on 26 June 2010

VII. As far as relevant to the present decision, the appellant essentially argued as follows (more details are provided in the reasons, where appropriate).

*Late-raised ground for opposition / late-filed document
D4 - admittance*

Neither of the documents D1 or D4 was *prima facie* relevant to novelty of the subject-matter of claim 1 of the then main request (patent as granted) in the opposition proceedings. Thus, neither the late-raised ground for opposition of lack of novelty nor the late-filed document D4 should have been admitted into the proceedings by the opposition division.

Auxiliary request 1 - Admittance

The opposition division did not correctly assess the patentability of auxiliary request 1 and should have admitted it into the opposition proceedings.

Auxiliary request 1 - Novelty

D1 failed to disclose at least that the grid structures continuously merge into each other (feature f')). Hence, the subject-matter of claim 1 was novel over D1.

D4 did not disclose, at the least, grid structures according to features c), e') and f'). Hence, the subject-matter of claim 1 was novel over D4.

Auxiliary request 1 - Inventive step

Inventive step of the subject-matter of claim 1 should be acknowledged on the basis of grid structures continuously merging into each other according to feature f').

The objections of lack of inventive step starting from D1 taken as the closest prior art in combination with

the skilled person's common general knowledge or the teaching of D4 were raised for the first time at the oral proceedings before the board. Thus, they should not be admitted into the proceedings as there were no cogent reasons justifying exceptional circumstances for their late filing.

Auxiliary request 1 - added subject-matter and clarity

The objections of added subject-matter and lack of clarity were raised for the first time with the respondent's letter dated 14 February 2023, i.e. after notification of the summons to oral proceedings. In the absence of cogent reasons justifying exceptional circumstances for their late filing, they should not be admitted into the proceedings.

- VIII. As far as relevant to the present decision, the respondent essentially argued as follows (more details are provided in the reasons, where appropriate).

*Late-raised ground for opposition / late-filed document
D4 - admittance*

Both documents D1 and D4 were *prima facie* relevant to novelty of the subject-matter of claim 1 of the then main request (patent as granted) in the opposition proceedings. Thus, both the late-raised ground for opposition of lack of novelty and the late-filed document D4 were correctly admitted into the proceedings by the opposition division.

Auxiliary request 1 - Admittance

The opposition division did not admit auxiliary request 1 into the proceedings as it was regarded as

being *prima facie* not patentable having regard to the prior art. This assessment was correct and should be upheld.

Auxiliary request 1 - Novelty

D1 disclosed all the features of claim 1 of the patent as granted. The amendments inserted into features e') and f') of claim 1 of auxiliary request 1 (see point V. above) were also disclosed in D1 - see, for instance, Figures 2 or 10. Hence, the subject-matter of claim 1 of auxiliary request 1 lacked novelty over D1.

D4, namely Figure 6a thereof, disclosed a grid structure according to features c), e') and f'). Since D4 also disclosed all other features of claim 1 of auxiliary request 1, the subject-matter of the latter lacked novelty over D4.

Auxiliary request 1 - Inventive step

The objections of lack of inventive step which had been raised against the patent as granted also applied to auxiliary request 1.

The subject-matter of claim 1 of auxiliary request 1 lacked inventive step starting from D1 taken as the closest prior art in combination with the skilled person's common general knowledge or the teaching of D4.

These objections should be admitted into the appeal proceedings as the arguments provided in writing by the appellant with respect to the grid structure were obscure. The respondent had thus been surprised by the

conclusions of the board concerning the absence of a grid in D4.

Furthermore, inventive-step objections starting from D1 had already been raised with the statement setting out the grounds of appeal and, in any case, the respondent's intention to present arguments concerning lack of inventive step of claim 1 had been announced in the letter of 14 February 2023.

Auxiliary request 1 - added subject-matter and clarity

The board's preliminary assessment of the case provided in its communication dated 29 September 2022 had been unexpected, in particular with respect to the admittance of auxiliary request 1, which had been contrary to the decision under appeal, and with respect to the definition of a grid structure. These factors represented cogent reasons justifying exceptional circumstances for the late filing of objections of added subject-matter and lack of clarity against auxiliary request 1. Thus, the objections should be admitted into the proceedings.

Reasons for the Decision

1. *Late-raised ground for opposition / late-filed document D4 - admittance*

The reasons below were indicated in the board's preliminary opinion in its communication of 29 September 2022, point 6. As the board's opinion in this regard has subsequently not been commented on or contested by the parties, either in writing or orally

at the oral proceedings, the board sees no reason to change its preliminary assessment of this issue after reconsidering all relevant submissions.

- 1.1 The ground for opposition based on lack of novelty was admitted into the proceedings by the opposition division during the oral proceedings.

The opposition division considered that D1 was *prima facie* relevant for questioning the maintenance of the patent. An analysis of its disclosure had to be carried out for inventive step anyway, and this could lead to the same result as a feature analysis for novelty. For this reason, admitting the late-raised ground for opposition of lack of novelty was found not to be detrimental to the appellant.

The opposition division also admitted D4 into the proceedings as it seemed to be *prima facie* relevant to novelty (see decision under appeal, point II.3.2, and minutes, point 2).

- 1.2 The appellant argued that it had not agreed to the admittance of the late-raised ground for opposition. Neither of D1 or D4 was *prima facie* relevant to novelty of the subject-matter of claim 1 of the then main request (patent as granted). Thus, neither the late-raised ground for opposition nor D4 should have been admitted into the proceedings.

Hence, for the appellant, the opposition division did not correctly exercise its discretion when admitting the late-raised ground for opposition and late-filed document D4 into the proceedings and therefore they should not be admitted into the proceedings.

1.3 It is established case law that, on appeal against a decision taken by a department of first instance in exercise of its discretion, it is not for the board to review all the facts and circumstances of the case as if it were in that department's place and to decide whether or not it would have exercised discretion in the same way. The board should only overrule the way in which the department of first instance exercised its discretion in reaching a decision in a particular case if the board concludes that it did so in accordance with the **wrong principles, without taking the right principles into account or in an arbitrary or unreasonable way**, thereby exceeding the proper limits of its discretion (see Case Law of the Boards of Appeal (CLB), 10th edition, 2022, Chapter, V.A.3.4.1.b; G 7/93, OJ EPO 1994, 775).

The board considers that in the present case the opposition division applied the right principle of *prima facie* relevance for admitting the late-raised ground for opposition as well as the late-filed document D4 into the proceedings, doing so in a non-arbitrary and reasonable way. The board further notes that the opposition division had the right to consider this ground for opposition without the patent proprietor's approval (G 10/91, EPO OJ 1993, 420).

The fact that the appellant holds a different view on the *prima facie* assessment or that the opposition division ultimately came to a different conclusion - i.e. to a conclusion deviating from its *prima facie* assessment - when assessing the lack-of-novelty objection(s) in full does not change the fact that the opposition division applied the right principles in a non-arbitrary and reasonable way.

Consequently, there is no reason for the board to overrule the opposition division's discretionary decisions on these issues.

In addition to the above, the decision under appeal is based upon the ground for opposition of lack of novelty and on document D4. Thus, referring to lack of novelty and D4 does not constitute an amendment under Article 12(2) and (4) RPBA 2020, the admittance of which would be subject to the board's own discretion.

2. *Auxiliary request 1*

Undisputed by the parties, auxiliary request 1 filed with the statement of grounds of appeal corresponds to auxiliary request 1 on which the decision under appeal was based.

2.1 Admittance

2.1.1 The then auxiliary request 1 was filed during the oral proceedings before the opposition division, which did not admit it into the proceedings as it did not overcome, *prima facie*, the objection of lack of inventive step deemed valid in respect of the subject-matter of claim 1 of the then main request (patent as granted).

2.1.2 As put forward by the board during the oral proceedings and undisputed by the parties, the opposition division provided in the decision under appeal only an **unreasoned statement** for the non-admittance of auxiliary request 1 into the opposition proceedings (see T 544/12, Reasons 2.2.4). In particular, no reasoning was provided as to *why* this request, *prima facie*, did not overcome the objection of lack of

inventive step in the opposition division's view - see point II.4.2 of the decision under appeal, more specifically page 11, last paragraph. Thus, the decision under appeal lacks sufficient reasoning in this respect. Moreover, according to point 5 of the minutes of the oral proceedings before the opposition division, when dealing with the admittance of said request, only issues of added subject-matter were raised and discussed with the parties. Nevertheless, the opposition division exclusively relied on *prima facie* lack of inventive step for its non-admittance. Thus, in view of the lack of information in the decision under appeal and considering the minutes of the oral proceedings before the opposition division, the board must assume that the opposition division exercised its discretion not to admit auxiliary request 1 into the opposition proceedings in an arbitrary way.

As a result, since the opposition division's decision not to admit auxiliary request 1 into the opposition proceedings resulted from an error in the use of discretion, the board admits this request into the appeal proceedings in accordance with Article 12(6), first sentence, first alternative, RPBA 2020.

2.2 Novelty

The respondent argued that the subject-matter of claim 1 of auxiliary request 1 lacked novelty with respect to each of the documents D1 and D4.

With respect to D1

2.2.1 Undisputed by the parties, claim 1 of D1 discloses a method for creating a freeform-fabricated core composite article (8) comprising a step of creating a freeform-fabricated core (10). D1 applies freeform-fabrication technologies to obtain the latter, also called "*rapid prototyping*" or "*layer fabrication*", using freeform-fabrication apparatuses such as stereolithography apparatus (SLA) - see column 3, lines 21-48, column 11, line 66 to column 12, line 62, and column 15, lines 24-29. The SLA technology is encompassed by claim 1 of auxiliary request 1 - see patent, paragraph 32.

The freeform-fabricated core (10) can be obtained in D1 from a large variety of materials, such as polymer resin, paper, metal, ceramic/polymer blend, wax and other man-made or naturally produced materials that are suitable for use in the selected freeform-fabrication machine - column 9, lines 6-12. Figure 10 reproduced below discloses pattern structures of the freeform-fabricated core, such as a honeycomb pattern structure (30), an isosceles triangular pattern tensegrity structure (32) or a right triangular pattern tensegrity structure (34).

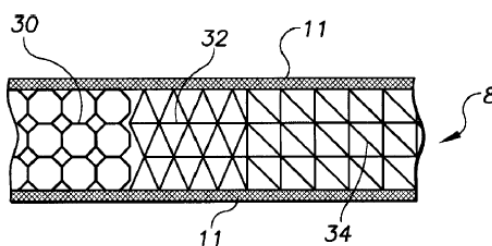


Figure 10 of D1

2.2.2 In the decision under appeal, D1 had been found to anticipate claim 1 of the patent as granted. For the respondent, the amendments inserted into features e') and f') of claim 1 of auxiliary request 1 with respect

to claim 1 of the patent as granted (see point V. above) were disclosed by Figure 2 of D1, showing continuously merging regions of grid structures (10) (see Figure 2 of D1 reproduced below). Hence, according to the respondent the subject-matter of claim 1 of auxiliary request 1 also lacked novelty over D1.

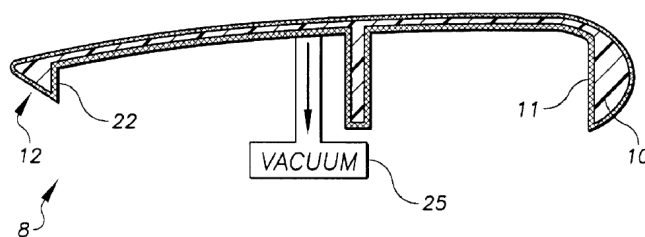


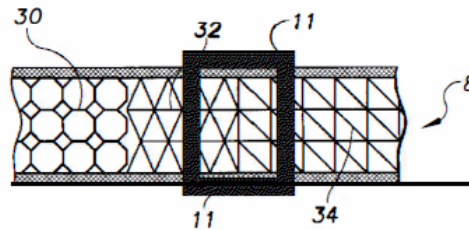
Figure 2 of D1

2.2.3 The board does not share the respondent's view since the internal structure of the freeform-fabricated core (10) is not apparent in Figure 2 of D1. Thus, Figure 2 of D1 does not disclose, at the least, feature f'), i.e. grid structures continuously merging into each other.

2.2.4 At the oral proceedings before the board, the respondent further argued - as also put forward in its submission dated 14 February 2023 - that Figure 10 disclosed different grid structures (32) and (34) with different internal structures to respond to requirements for differences in physical strength and flexibility throughout the freeform-fabricated core (10) (see column 15, line 67, to column 16, line 4).

A continuous merging of adjacent grid structures (34) and (32) was disclosed, as can be seen from amended Figure 10 below (submitted by the respondent with its letter of 14 February 2023), since the angle of

respective non-horizontal lines was continuously shifted in the transition region.



Amended Figure 10 of D1

Therefore, document D1 disclosed grid structures merging into each other according to feature f').

Also, the use in D1 of the word "throughout" in the context of the disclosure of differences in physical strength and flexibility implied - to the skilled person - that the transition of the grid structures was continuous.

- 2.2.5 The board does not share the respondent's view, for the reason - given by the appellant - that the grid structures (32) and (34) in Figure 10 of D1 do not merge continuously but, rather, exhibit an abrupt change from one structure to the other. As discussed in point 2.2.1 above, structure (32) is an isosceles triangular pattern tensegrity structure, while structure (34) a right triangular pattern tensegrity structure. The change in pattern is discontinuous, i.e. there is no continuous merging from one structure to the other.

In this respect, Figure 4a of the patent illustrates grid structures "merging continuously" according to feature f') - see also paragraph [0026]. The dimensions of the unit cells of the grid or of the thickness of the single grid bars vary continuously, i.e. in a

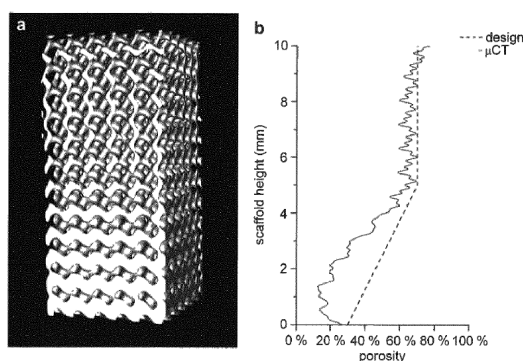
stepless manner, thereby leading to an object with several areas of different mechanical characteristics, implemented by grid structures, said grid structures continuously merging into each other - see paragraph [0025].

2.2.6 As a consequence, D1 does not disclose, at the least, feature f') and, therefore, the subject-matter of claim 1 of auxiliary request 1 is novel over D1 (Article 54(1) EPC).

With respect to D4

2.2.7 The parties were in dispute as to whether D4 disclosed a "grid structure" according to features c), e') and f') of claim 1 of auxiliary request 1.

2.2.8 The respondent argued that document D4 was generally referring to specific repeating unit cells, which could be used to form larger superordinate **grid structures**. Figures 6a and 6b, reproduced below, disclosed an embodiment of a grid having a gradient structure, since the structure had, e.g., inclined, parallel lines.



Figures 6a and 6b of D4

The respondent provided the following arguments in support of its view. Firstly, the claimed grid

structure was not defined and claim 1 did not even require the grid to be regular. Secondly, the expression "*scaffold*" used in D4 clearly implied in any case a regular grid structure, bearing in mind that a grid was typically built from unit cells. Thirdly, D4 explicitly disclosed (see section 3.1, page 6910, right-hand column, last paragraph) that the cube architecture was a lattice-like structure, and it used the expression "*lattice structure*", a lattice being nothing other than a grid.

Grid structures were also disclosed for the cube architecture shown in Figure 1 of D4 reproduced below. The structure had a different height dimension relative to the dimensions in length and width. Therefore, the structure inevitably comprised areas having different mechanical characteristics since the "column" as shown in the photograph will have, e. g. a different behaviour against compressive or tensile forces, if subjected to horizontal and vertical forces.

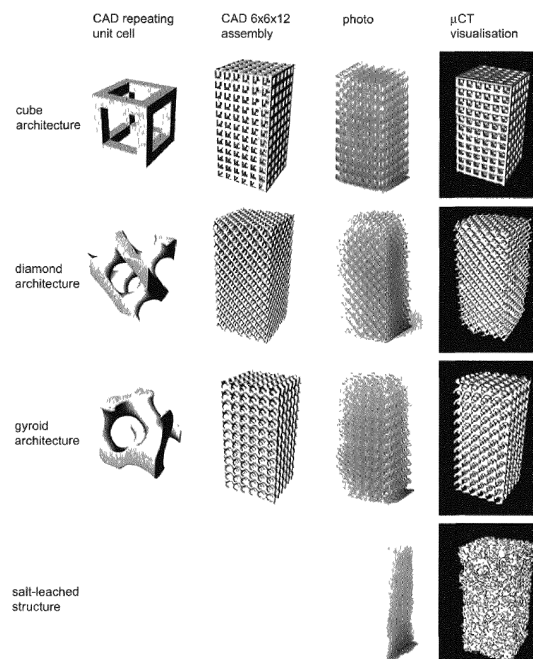


Figure 1 of D4

D4 also explicitly disclosed in its introductory part (see first page, right-hand column) that "[S]structural parameters such as porosity and pore size, and even gradients thereof, can be freely varied". In particular, D4 used the expression "*anisotropic lattice-like structure*".

As a result, D4 disclosed a grid structure according to features c), e') and f') of claim 1 of auxiliary request 1.

2.2.9 The board does not share the respondent's view that Figure 6a of D4, which is the embodiment on which the lack-of-novelty objection is based, discloses a "*grid structure*".

According to the definition cited in the decision under appeal (see point II.3.3.2, page 9) taken from the Oxford dictionary, a grid is "*a framework of spaced bars that are parallel to or cross each other; a grating*". The Oxford Advanced Learner's Dictionary, available online (URL: "<https://www.oxfordlearnersdictionaries.com/definition/english/grid>") and referred to in the board's communication dated 29 September 2022, provides that a grid is "*a pattern of straight lines, usually crossing each other to form squares*". Consequently, in the context of the claimed invention, the board considers that the person skilled in the art would understand the term "grid" as at least requiring groups of straight lines crossing each other (see also point 2.2.11 below). The structure shown in Figure 6a does not fulfil this requirement, since it does not comprise any straight lines. Hence, the subject-matter of claim 1 is novel over Figure 6a of D4.

The fact that D4 refers elsewhere in the document to a "*lattice structure*" or to a "*cube architecture*" - as put forward by the respondent - does not concern the embodiment of Figure 6a. Furthermore, contrary to the respondent's view, the term "*scaffold*" is a more generic term, which does not disclose the specific "*grid structure*" of claim 1.

The fact that the dimensions of the cube structure in Figure 1 could be different in the height, length or width direction only means that the mechanical properties of the superstructure resulting from its repetition would probably be anisotropic, i.e. exhibiting a different mechanical response as a function of the direction of the force applied. This leads to a superstructure, i.e. a single area, with anisotropic properties, but does not amount - contrary to the respondent's view - to having different areas of different mechanical characteristics (feature e')).

The disclosure in the introductory part of D4, page 6909, right-hand column, that parameters such as porosity and pore size, and even gradients thereof, can be freely varied is a general statement, which is illustrated in Figure 6a for a gyroid structure. This is not disclosed, however, in combination with a cube architecture as shown in Figure 1, contrary to what the respondent seems to suggest.

- 2.2.10 At the oral proceedings before the board, the respondent further argued - as also put forward in its submission dated 14 February 2023 - that Figure 1 of document D4 (reproduced above) showed diverse architectures, each comprising a "*CAD repeating unit*

cell". For the respondent, a repeating unit cell was a characteristic of a three-dimensional grid structure.

Since the gyroid architecture of document D4 included a unit cell, it was also to be considered as a grid structure. Thus, the gyroid architecture of Figure 6a (also reproduced above) built from repeating unit cells was to be regarded as a grid structure.

The reference to the definition of the Oxford dictionary was not adequate, as it provided the broad expression "*grid structure*" used in claim 1 with too narrow an interpretation. This was illustrated by the Merriam Webster dictionary providing different definitions for the term "*grid*" (see URL: <https://www.merriam-webster.com/dictionary/grid>) and, hence, showing the ambiguity of the term "*grid*" and the need for a broad interpretation of the expression "*grid structure*".

According to the Merriam Webster dictionary, a grid could be a "*network of uniformly spaced horizontal and perpendicular lines*". This definition was illustrated in Figure 6a of D4 since horizontal and perpendicular lines could easily be recognised there. In particular, no straight lines were required for the grid definition in the patent.

The German dictionary Pons confirmed that the German word "*Gitter*" could be translated as "*grid*" and "*lattice*" (see URL: <https://de.pons.com/übersetzung/deutsch-englisch/gitter>), showing that a "*lattice*" was nothing other than a "*grid*".

At any rate, the cited dictionaries could not be considered as equating to technical literature. More

relevant was what the skilled person in the technical field would understand from the expression "*grid structure*", i.e. a structure obtained from a repeating unit cell, as already mentioned above.

The patent did not provide any information or definition for the "*grid structure*". In particular, it did not disclose that the grid structure formed a square and that square formation would be a characteristic of a grid structure according to the claimed subject-matter. Paragraph [0025] of the patent indicated that "*any arbitrary other grid*" than the diamond grid could be a grid structure, i.e. any geometric grid. Neither paragraph [0025] nor claim 5 of the patent specified that every grid according to claim 1 of auxiliary request 1 would be formed by "*bars*".

- 2.2.11 The board does not share the respondent's view. The appellant argued convincingly that it can be derived from the available dictionary definitions that a grid structure has at least a first group of spaced lines aligned in one direction and a second group of spaced lines aligned in another direction, the two groups of lines crossing each other. In view of the fact that the Oxford dictionaries mention "*bars*" or "*straight lines*" and the Merriam Webster dictionary specifies "*perpendicular lines*", the board considers that - as put forward by the appellant - the lines of the two groups are inevitably straight lines. The use of a German dictionary to make an indirect link between "*grid*" and "*lattice*" is not appropriate to interpret a term in English, which is the language of the patent. Moreover, the German dictionary does not contradict the above-mentioned features of a grid structure derived from the English dictionary definitions. In this

respect, the board notes that the respondent's view concerning the skilled person's understanding of the expression "*grid structure*" in the technical field has not been supported by any evidence regarding their common general knowledge. Thus, it remains a mere allegation, which is not convincing.

The feature "*grid structure*" as interpreted by the board in point 2.2.9 above is not found in Figure 6a of D4 (see figure under point 2.2.8 above), since it does not disclose straight lines. Hence, the gyroid architecture of Figure 6a, even if built from repeating unit cells, cannot be regarded as a grid structure according to features c), e') and f').

As argued by the appellant, the contested patent itself also indicates that the feature "*grid structure*" must be understood as set out in point 2.2.9 above. As a matter of fact, it is disclosed in the patent that the grid structure comprises "*grid bars*" (see paragraph [0025] and claim 5), i.e. straight lines, as also illustrated in Figure 4a. The fact that, in paragraph [0025], reference is made to "*any arbitrary other grid*" does not imply that any geometric structure would be covered by the claims. Instead, the "*arbitrary other grid*" must still be a grid, i.e. a structure with the properties discussed above.

2.2.12 As a consequence of the above, D4 does not disclose, at the least, a grid structure according to features c), e') and f'), and the subject-matter of claim 1 of auxiliary request 1 is thus novel over D4 (Article 54(1) EPC).

2.3 Inventive step

- 2.3.1 In its reply to the statement setting out the grounds of appeal, the respondent merely referred to its previous objections of lack of inventive step which had been raised against claim 1 of a former, no longer maintained request (patent as granted).

In doing so, the respondent did not take into account amended features e') and f') of claim 1 of auxiliary request 1 in its argumentation.

The objections are therefore not convincing. As a matter of fact, since neither of the documents D1 and D4 discloses distinguishing feature f') (see point 2.2 above), enabling the mechanical stability of the objects produced to be enhanced (see decision under appeal, point II.5.4, page 14, first full paragraph), the combination of the teachings of said documents does not lead the skilled person to the claimed subject-matter in an obvious manner.

- 2.3.2 At the oral proceedings before the board, the respondent raised for the first time objections of lack of inventive step against the subject-matter of claim 1 of auxiliary request 1 starting from D1 as the closest prior art in combination with the skilled person's common general knowledge or the teaching of D4.

The late filing of these objections constitutes an amendment to the respondent's appeal case to be considered under Article 13(2) RPBA 2020 for its admittance.

2.3.3 To justify the admittance of the late-filed objections, the respondent submitted that the arguments provided in writing by the appellant with respect to the grid structure were obscure and that it had expected to be able to convince the board that D1 and/or D4 disclosed the claimed grid structure.

The respondent also referred to page 8 of its reply to the statement setting out the grounds of appeal, where inventive-step objections starting from D1 had been raised against the patent as granted, and to its letter of 14 February 2023, where the intention ("*if required*") to present arguments concerning lack of inventive step of claim 1 of auxiliary request 1 had been announced.

2.3.4 The arguments provided by the respondent do not constitute cogent reasons justifying the existence of exceptional circumstances.

The respondent deliberately did not raise objections of lack of inventive step against auxiliary request 1 with its written submissions. With its reply to the statement setting out the grounds, the respondent did not address the amendments performed in claim 1 of auxiliary request 1. The objections of lack of inventive step on page 8 of said reply are directed against a former, no longer maintained request (patent as granted) (see also point 2.3.1 above). With its letter dated 14 February 2023 (point II.3, page 12), the respondent merely advised of its intention to raise such objections for the first time at the oral proceedings.

The fact that the respondent considered that it could convince the board orally at the oral proceedings does

not constitute a valid reason for not filing further objections at an earlier point in time than at the oral proceedings. Far from being exceptional, it is rather the usual case that parties are convinced of their own lines of argument. Moreover, if following the respondent's view, a board would always have to admit new objections at the oral proceedings once it found a previously presented objection not to be convincing. However, from an objective point of view, no surprise can arise from a board concluding at the oral proceedings that the arguments of another party, which were part of the appeal proceedings from the beginning, are convincing.

Contrary to the respondent's view, the arguments provided by the appellant with its written submissions were not obscure either, as they convinced the board of the novelty of the claimed subject-matter over both documents D1 and D4 - see the board's communication dated 29 September 2022, point 8.4.

2.3.5 In view of the above, and in the absence of cogent reasons justifying the existence of exceptional circumstances, the late-raised objections of lack of inventive step are not admitted into the proceedings pursuant to Article 13(2) RPBA 2020.

2.4 Additional late-filed objections - admittance

2.4.1 With its letter dated 14 February 2023, the respondent raised for the first time in the appeal proceedings objections under Articles 123(2) and 84 EPC against auxiliary request 1.

The respondent justified the late filing of the objections by stating that it had been surprised by the

board's unexpected preliminary assessment of the case provided in the communication dated 29 September 2022, in particular with respect to the admittance of auxiliary request 1 contrary to the decision under appeal, and with regard to the definition of a grid structure.

- 2.4.2 As discussed during the oral proceedings, these objections were filed for the first time in the appeal proceedings after notification of the summons to the parties. Hence, undisputed by the parties, they constitute an amendment to the respondent's appeal case to be considered under Article 13(2) RPBA 2020 for its admittance.

The fact that the board informs the parties in its preliminary opinion about issues in dispute between the parties, such as the interpretation of a specific feature ("*grid structure*"), or reasons and conclusions given in the decision under appeal, such as the admittance of auxiliary request 1, thereby possibly deviating from the decision under appeal, represents the usual practice in the appeal proceedings. It does not constitute exceptional circumstances justifying the admittance of an amendment to a party's appeal case, especially when - as in the present case - the board based its preliminary opinion on the parties' submissions, i.e. it did not introduce of its own motion anything new, e.g. new objections.

As a consequence, the late-filed objections raised under Articles 123(2) and 84 EPC were not admitted into the appeal proceedings.

- 2.5 Description

During the oral proceedings before the board, the appellant filed an adaptation of the description to the set of claims according to auxiliary request 1. The respondent did not raise any objection against it, nor did the board.

3. *Auxiliary requests 2 to 5*

Given the above conclusion on auxiliary request 1, a discussion on auxiliary requests 2 to 5 is not required.

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 with the order to maintain the patent as amended in the following version:

Claims 1 to 12 according to auxiliary request 1 filed with the statement setting out the grounds of appeal;

Description as filed during the oral proceedings before the Board;

Figures 1 to 6 of the patent specification.

The Registrar:

The Chair:



C. Rodríguez Rodríguez

N. Obrovski

Decision electronically authenticated