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**Datasheet for the decision
of 27 February 2023**

Case Number: T 1808/21 - 3.2.07

Application Number: 16166677.1

Publication Number: 3070027

IPC: B65G1/04

Language of the proceedings: EN

Title of invention:

ROBOT FOR TRANSPORTING STORAGE BINS

Patent Proprietor:

Autostore Technology AS

Opponents:

Abitz & Partner Patentanwälte mbB
Tharsus Group Limited
Ocado Solutions Limited

Headword:

Relevant legal provisions:

EPC Art. 99(1), 100, 100(b), 83, 100(a), 54, 54(2), 56, 112(1)
(a)
EPC R. 76, 77(1)
RPBA 2020 Art. 12(6), 13(1), 15(1)

Keyword:

Admissibility of opposition - (yes)

Grounds for opposition - insufficiency of disclosure (no) -
lack of patentability (no)

Novelty - availability to the public

Referral to the Enlarged Board of Appeal - (no)

Decisions cited:

G 0003/97, G 0004/97, T 1081/01, T 1847/12, T 0660/16,
T 0768/20

Catchword:



Beschwerdekammern

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Case Number: T 1808/21 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 27 February 2023

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Appellant 3: Ocado Solutions Limited
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 18 August 2021 rejecting the opposition filed against European patent No. 3070027 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman I. Beckedorf
Members: A. Cano Palmero
A. Beckman
B. Paul
C. Brandt

Summary of Facts and Submissions

- I. Opponent 1 (appellant 1) and opponents/interveners 2 and 3 (appellants 2 and 3) lodged appeals within the prescribed period and in the prescribed form against the decision of the opposition division rejecting the opposition and the interventions against European patent No. 3 070 027.
- II. The opposition and the interventions were directed against the patent in its entirety and based on the grounds for opposition pursuant to Articles 100(a) and (b) EPC (lack of novelty, lack of inventive step and insufficiency of disclosure).
- III. In preparation for oral proceedings, the Board communicated its preliminary assessment of the case by means of a communication pursuant to Article 15(1) RPBA 2020 that the appeals were likely to be dismissed, to which appellants 1 and 3 and the respondent (patent proprietor) responded in writing.
- IV. Oral proceedings before the Board took place on 27 February 2023. At the conclusion of the proceedings the decision was announced. Further details of the proceedings can be found in the minutes thereof.
- V. The final requests of the parties are as follows,

for the appellants:

that the decision be set aside and
that the patent be revoked in its entirety,

for the respondent (patent proprietor):

that the appeal be dismissed, *i.e.* that the patent be maintained as granted (main request);
or in the alternative,
when setting aside the decision under appeal, that the patent be maintained in amended form according to one of the sets of claims according to the first auxiliary request filed with letter of 20 January 2020, or according to the second and third auxiliary requests filed with letter of 29 January 2021.

In addition, appellant 1 and the respondent requested, with letters dated 25 January 2023 and 22 February 2023 respectively,

that questions be referred to the Enlarged Board of Appeal.

VI. The lines of argument of the parties relevant for the present decision with regard to the patent as granted are dealt with in detail in the reasons for the decision.

VII. The following **evidence** has been filed during the opposition proceedings and re-filed by the appellant with its statement of grounds of appeal:

- D1:** DE 10 2009 017 241 A1;
- D2:** NO 317366 B1;
- D4:** JP 10-299280 A;
- D5:** "Large Autostore design example";
- D5A:** Statement of Mr. Stadie regarding D5;
- D6:** Prior art referred to in figures 1 and 2 of the patent in suit;

- D13: WO 98/49075 A1;
- D14: Disclosure of Bank bots and Bank bot design;
- D14A: EVS Web Pages (<https://evs.ru>);
- D14B: Articles published in the Haugesunds Avis newspaper and Teknisk Ukeblad magazine;
- D14C: Certificate of Conformity;
- D14D: Bank Bot Designs;
- D17: Annex A including email from Mr. Hjorteland;
- D20: Opinion on Russian Confidentiality Law (Khabarov);
- D22: "An introduction to the AutoStore system".

The following documents have been filed for the first time in appeal proceedings:

- D26: Presentation "Autostore solution for CBR";
- D27: Material Facts;
- D28: Extract from "A Practitioner's Guide to European Patent Law";
- D29: Observations of Sir Christopher Floyd;
- D30: Declaration of Sir Robin Jacob;
- D31: Declaration Professor Adrian Briggs KC.

VIII. Independent **claim 1** according to the **patent as granted** with the features analysis used by the parties reads as follows:

- "1.1 A storage system (3) comprising a remotely operated vehicle (1),
- 1.2 a vehicle support (14) comprising a plurality of supporting rails (13) forming a two dimensional matrix of guiding meshes, the vehicle support (14) being configured to guide the movements of the remotely operated vehicle (1) in a first direction (X) and a second direction (Y) during use,

- 1.3 a bin storing structure (15) supporting the vehicle support (14), the structure (15) comprising a plurality of storage columns (8,8a,8b), wherein each storage columns (8,8a,8b) is arranged to accommodate a vertical stack of storage bins (2),
- 1.4 and the main part of the bin storing structure (15) coincides with positions on the vehicle support (14) where the supporting rails (13) are crossing,
- 1.5 - a bin lift device (50) arranged to convey a vehicle delivered storage bin (2) in a direction perpendicular to the lateral plane of the vehicle support (14) between the vehicle support (14) and a delivery station (60),

characterized in that

- 1.6 the remotely operated vehicle (1) comprises a vehicle body (4) comprising a first section (5,5a,5b) for storing vehicle driving means (6)
- 1.7 and a second section (7) for receiving any storage bin (2) stored in a storage column (8,8a,8b) within the storage system (3), the second section (7) comprising a centrally arranged cavity (7) within the vehicle body (4), the cavity (7) having at least one bin receiving opening (12) facing towards the storage columns (8,8a,8b) during use,
- 1.8 a vehicle lifting device (9) at least indirectly connected to the vehicle body (4) for lifting the storage bin (2) into the second section (7),
- 1.9 a first set of vehicle rolling means (10) connected to the vehicle body (4) allowing movement of the vehicle (1) along the first direction (X) within the storage system (3) during use
- 1.10 and a second set of vehicle rolling means (11) connected to the vehicle body (4) allowing

movement of the vehicle (1) along the second direction (Y) in the storage system (3) during use, the second direction (Y) being perpendicular to the first direction (X),

1.11 at least one of the sets of vehicle rolling means (11) being arranged fully within the vehicle body (4)."

IX. As the auxiliary requests do not form part of this decision, it is not necessary to reproduce them here.

Reasons for the Decision

1. The following findings (points 2 and 3) on the admissibility of the opposition and on sufficiency of disclosure of the patent as granted correspond to the view of the Board which had been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2020 (see points 6 and 8 thereof). The parties have neither reacted nor objected, orally or in writing, to the opinion expressed in that communication. After having reconsidered all relevant legal and factual aspects of the case, the Board does not see any reason to deviate from its preliminary opinion and confirms it as definitive for the present decision.

2. *Admissibility of the opposition*

2.1 The respondent argues in point 2 of the reply to the statements of grounds of appeal that the opposition of appellant 1 should be deemed inadmissible. In the respondent's view, appellant 1 was enabled to circumvent the law by acting as a "straw man" of Ocado Group (identified by the patent proprietor as appellant

3 and one of the interveners in opposition proceedings). Indeed, appellant 1 relied in its opposition on evidence, in particular D5, which was allegedly only within the sphere of Ocado in connection with an alleged lack of confidentiality of this material (D5A).

- 2.1.1 According to the respondent, if Ocado had presented this alleged public evidence D5 in opposition proceedings, it would have been upon Ocado to demonstrate the public availability of this evidence beyond any reasonable doubt, since D5 rested within the power and knowledge of Ocado only. In contrast, by presenting this evidence through the alleged "straw man"/appellant 1, the burden of proof required to demonstrate the availability of D5 is reduced to a balance of probabilities, thereby circumventing the law.
- 2.2 The Board is not persuaded by the arguments of the respondent and is of the view that the opposition is admissible, for the following reasons.
 - 2.2.1 In the case at hand, appellant 1 had filed its opposition meeting the requirements of Articles 99(1) and 100 EPC as well as of Rules 76 and 77(1) EPC.
 - 2.2.2 Further, as correctly indicated by the opposition division in point 1.2 of the reasons for the decision under appeal, the filing of an opposition by a "straw man" acting for some other person does not automatically result in a circumvention of the law that could render the opposition inadmissible (see G 3/97, G 4/97 and Case Law of the Boards of Appeal [CLB], 10th edition 2022, IV.C.2.1.4).

2.2.3 On the question whether appellant 1 had circumvented the law by allegedly lowering the standard of proof required for the public availability of D5 thank to its role as a "straw man", the Board is convinced such distinction between the "balance of probabilities" standard and the "beyond any reasonable doubt" standard is not decisive in the present case.

In line with recent decisions of the boards of appeal, such as T 768/20 (point 2.1.2 of the reasons) and T 660/16 (point 5.3.5 of the reasons), the Board agrees that, also in the present case, the relevant point is rather whether the deciding body is ultimately persuaded in view of all available facts that the relevant evidence, which had been duly presented by appellant 1 when forming its opposition, had indeed been made publicly available.

With this in mind, the Board is convinced that the point of confidentiality of D5 and therefore its consideration as prior art in the sense of Article 54(2) EPC is to be assessed irrespective of which party presented the evidence, so that no circumvention of the law is apparent by allegedly submitting this evidence through a "straw man".

3. *Patent as granted (main request) - Sufficiency of disclosure, Articles 100(b) and 83 EPC*

3.1 Appellants 2 and 3 argue that the patent "provides no teaching of the structure of a bin lift device, let alone how it can be integrated into a storage system having the other features in claim 1", and use the squeeze argument that "the Opposition Division's conclusion can only be deemed correct if the skilled person was already aware of such a device from his/her

general knowledge. Thus, to the extent the patent meets the requirements of Article 83 EPC, the bin lift device cannot contribute to inventive step".

- 3.2 It is not completely clear to the Board whether appellants 2 and 3 (and appellant 1 by referencing to the grounds of the other appellants) actually contest the reasoned findings of the opposition division on sufficiency of disclosure. In any case, the Board concurs with the opposition division that the claimed invention is sufficiently disclosed, since the skilled person would have no difficulty carrying out the invention, in particular the bin lift device, based on the disclosure of the patent in combination with the common general knowledge. Furthermore, the appellants have not presented serious doubts substantiated by verifiable facts that could prove the contrary (see CLB, *supra*, II.C.9).
- 3.3 In sum, the appellants have not submitted convincing arguments that could demonstrate the incorrectness of the findings of the opposition division that the ground of opposition pursuant to Article 100(b) EPC does not prejudice the maintenance of the patent as granted.
4. *Patent as granted (main request) - Novelty, Articles 100(a) and 54 EPC*
- 4.1 Document D13/D13A
- 4.1.1 The appellants dispute the findings of the opposition division of point 4.3 of the reasons for the decision under appeal since document D13 would anticipate the subject-matter of claim 1 according to the patent as granted, including features 1.2, 1.10 and 1.11 (see point 6 of the statement of grounds of appeal of

appellant 1 and point 5 of the statements of grounds of appeal of appellants 2 and 3).

In particular, the appellants argue that figures 1 and 2 of D13 show that there are rails in both, the X and Y directions, thereby anticipating feature 1.2. Further, the appellants hold that features 1.10 and 1.11 are also at least implicitly anticipated. Although the second set of wheels in the Y-direction might not be explicitly disclosed, the only technically sensible interpretation of D13/D13A is that the vehicles must present this second set of wheels being in line with the Y-direction rails. This is also because the overall disclosure of D13/D13A explains that the storage system enables containers to be moved in both, the X and Y directions, and that such containers may be placed **anywhere** in the store, see for example page 6, lines 32 to 34, of D13.

In addition, according to appellant 1, this functionality arises also from a single vehicle and not from a combination of vehicles, as it is shown on page 5, lines 31 to 33, page 6, lines 12 to 15, and the abstract of D13 and claim 1 of D13A. The use of one single vehicle necessarily implies that this vehicle must have a two-dimensional mobility.

Appellants 2 and 3 further argue that the option of multiple devices that only operate in one direction does *per se* not enable access to all locations.

Appellant 3 additionally points out that it is clear from D13 on page 7, lines 6 and 7, line 16 and lines 26 to 27, and page 8, lines 11 to 13, that D13 aims for performing the transfer of containers at maximum speed and in reduced retrieval time. This amounts to a clear

disclosure that the vehicle device must be able to move in both, the X and Y directions

- 4.1.2 The Board is not persuaded by the appellants' arguments and is of the view that D13/D13A does at least not disclose features 1.10 and 1.11.

It is firstly noted what seems to be common ground, namely that there is no explicit disclosure of a second set of wheels in the Y-direction for the vehicles of D13/D13A.

In order to consider a feature as "implicitly" disclosed, it is established case law that it must be immediately apparent to the skilled person that nothing other than the alleged implicit feature forms part of the subject-matter disclosed, *i.e.* that the feature is directly and unambiguously derivable from the disclosure (see CLB, *supra*, I.C.4.3).

This is however not the case here. Contrary to the arguments and references provided by the appellants, the Board cannot recognise in the whole disclosure of D13/D13A that the placing **of the containers anywhere** in the store cannot be carried out by a combination of vehicles. In particular, the Board notes that the passage indicated by the appellants refer to the containers rather than to the vehicles. As correctly identified by the opposition division in points 4.3.8 and 4.3.9 of the reasons for the decision under appeal, if feature 1.2 was anticipated by D13/D13A an arrangement of two sets of multiple crane carriages which move either in the single X or Y direction would fit the purpose of the storage system.

The Board is furthermore convinced that D13/D13A is not restricted to the use of one unique vehicle device, and rather refers in multiple passages (see page 5, lines 11 to 16 of D13 and claim 1 of D13A) to a multiplicity of devices.

The last argument of appellant 3 that the purpose of providing a faster retrieval of the containers is also not convincing. Apart from the fact that many other technically feasible solutions could fit the purpose, the Board is of the view that at least in the case of D13/D13A, the general purpose of the method and apparatus described therein cannot be directly and unambiguously translated into a set of specific technical features.

It follows therefore that the provision of a second set of wheels in the Y-direction for the vehicles is not mandatory so that this feature cannot be regarded as being anticipated by D13/D13A. The subject-matter of claim 1 as granted is thus considered new over this disclosure.

4.2 Alleged public prior use D14 (D14A to D14D)

4.2.1 The following finding on the public availability of D14 correspond to the view of the Board which had been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2020 (see point 9.2 thereof). The parties have neither reacted nor objected, orally or in writing, to the opinion expressed in that communication. After having reconsidered all relevant legal and factual aspects of the case, the Board does not see any reason to deviate from its preliminary opinion and confirms it as definitive for the present decision.

- 4.2.2 The opposition division found in point 4.4.11 of the reasons of the decision under appeal that D14 did not demonstrate that a system according to claim 1 was publicly disclosed before the filing date of the application. None of the appellants dispute this finding, at least based on the evidence on file (see statement of grounds of appeal of appellant 1, point 7.1.2).
- 4.2.3 The Board sees no reason to deviate from this finding of the opposition division and thus considers D14 as not forming part of the prior art in the sense of Article 54(2) EPC.
- 4.3 Documents D26 and D27 - Admittance, Article 13(1) RPBA 2020
- 4.3.1 Appellants 2 and 3 submitted on 19 May 2022 (*i.e.* after the filing of their respective statements of grounds of appeal) document D26, consisting of presentation slides dated 29 September 2011 given by Hatteland Computer (AutoStore) to EVS and the CBR (Central Bank of Russia, which was the final client) and document D27, which is a compilation of alleged facts surrounding the case.
- 4.3.2 The filing of D26 and D27 is an amendment to the appellants' cases and its admittance is subject to Article 13(1) RPBA 2020, according to which any amendment to a party's appeal case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The amendment is subject to the parties' justification and may be admitted only at the discretion of the Board.

4.3.3 The respondent requested that documents D26 and D27 not be admitted into the appeal proceedings. In the respondent's view, the appellants could have filed the evidence at an earlier stage. Moreover, the admittance of D26 would lead to a new assessment of whether its content had been made publicly available, which is detrimental to the procedural economy. In addition, the alleged facts listed in D27 are challenged by the by the respondent.

4.3.4 According to all appellants, the content of the presentation of D26 was to be considered as part of the prior art in the sense of Article 54(2) EPC and as anticipating the subject-matter of claim 1 as granted, therefore *prima facie* relevant. The admission of these documents would have no impact in the procedural economy, since they were already known by the respondent as being subject of the parallel pending UK trial.

The appellants also argued that the presentation slides of D26 and the summary of material facts D27 describing the relationship between Autostore, EVS and the CBR had been filed at earliest stage possible, because this evidence had not yet been referred to at trial in the English proceedings. The possibility to rely on material that was referred to in open court and that was not designated confidential by the patent proprietor arose only once the UK trial finished, namely on 12 April 2022.

4.3.5 The Board is not convinced by the reasons provided by the appellants for the late filing of D26 and D27.

As correctly indicated by the respondent, the appellants could have sought to release evidence for

earlier submission at the EPO, either by seeking consent of the patent proprietor or by getting permission from the English court, as the appellants indeed did for document D17 in opposition proceedings.

In view of this, the Board is convinced that there were no legal obstacles, but just procedural formalities in order to release the evidence D26 and D27 and that it was rather the choice of the appellants not to submit these documents at least with their statement setting out the grounds of appeal, if not even at an earlier stage.

4.3.6 In this light, **the Board**, following the respondent's request and **exercising its discretion under Article 13(1) RPBA 2020, does not admit documents D26 and D27 into the appeal proceedings.**

4.4 Document D17 - Public availability, Article 54(2) EPC

4.4.1 The appellants argued that the opposition division erred in its finding of point 4.5.19 of the reasons for the decision under appeal that document D17 did not form part of the prior art in the sense of Article 54(2) EPC.

D17 contains an email from Mr Hjorteland of Jakob Hatteland Computer AS to a recipient at the company EVS. The appellants stated that, according to the Russian law (see document D20), and in the absence of any written no-disclosure agreement governing confidentiality by the date when the email was sent, the recipient at EVS was not be obliged to maintain secrecy on the content of D17.

The appellants further argued that the relationship between EVS and Jakob Hatteland Computer AS could not be seen as being participants in a common development project, but rather as being mere potential purchaser and vendor of an already finished article that just had to be adapted to the specific circumstances and requirements of the purchaser.

Consequently, EVS was part of the public that would have been able to use or disseminate the information disclosed in D17, which is to be considered as prior art under Article 54(2) EPC .

- 4.4.2 The Board is not persuaded by the appellants' arguments for the following reasons.

The appellants rely in the fact that, due to the lack of a written non-disclosure agreement and within the framework of Russian law, EVS could have been in place of disseminating the content of D17, but not that this actually happened.

The Board is in full agreement with the opposition division (see point 4.5.11 of the reasons for the decision under appeal) that an email is not accessible to the general public unless it is forwarded to third parties. This finding has not been disputed by the parties.

In the present case it is furthermore uncontested, or at least there is no evidence that could constitute proof of the contrary, that the content of D17 was not further disseminated after the email was sent from Mr Hjorteland to EVS.

It follows that, in the case at hand, and even if any national law was to be applied, the decisive matter to be established is whether EVS itself is to be considered as part of the public under Article 54(2) EPC or not.

Even if the email were to be taken into consideration as a potentially means of communication, it would not support the appellants' case for public availability of its content. Contrary to the appellants' arguments, the Board is convinced that the sender (Jakob Hatteland Computer AS) and the recipient (EVS) of the email D17 were not under a mere commercial relationship to sell or purchase a pre-existing product, and rather concurs with the respondent that both companies had immersed themselves in the development of a new product. This is confirmed at multiple passages of the email, which details *inter alia* that a new robot must be designed (different than the one available), that a new gripper had to be designed and that new columns of the grid system needed to be developed. The email also provides details of what is included in the "development cost".

In this sense, the Board concurs with the findings in points 4.5.9, 4.5.10 and 4.5.16 of the reasons for the decision under appeal that it is established case law at the EPO that a cooperation between two parties, in particular to develop a product (in the present case a new robot design and a new grid design), has as a final consequence that the participants in the development and/or the donors or recipients of information linked to such development cannot be treated as members of the public for the purpose of Article 54 EPC (see CLB, *supra*, I.C.3.3.3, I.C.3.4.7 and T 1081/01 and T 1847/12)

4.4.3 In sum, the Board, taking into account that the content of D17 did not depart from the development circle formed by Jakob Hatteland and EVS, does not consider D17 to form part of the prior art under Article 54(2) EPC.

5. *Request of appellant 1 and of the patent proprietor for referral of a question to the Enlarged Board of Appeal, Article 112(1) (a) EPC*

5.1 Appellant 1 requested that the following questions be referred to the Enlarged Board of Appeal:

"Q1. When interpreting whether a recipient of information is in a "special relationship" with the donor of the information pursuant to T 1081/01, is it a necessary condition for there to be an obligation on the recipient of the information to keep that information confidential?

In the event Q1 is answered in the affirmative:

Q2. In circumstances in which a party's obligation to maintain confidentiality differs:

a) when assessed under the law governing that party's freedom to disclose (namely the relevant national law), and

b) when assessed under the criteria set out under the jurisprudence of the EPO, on the basis of that jurisprudence being an approximation of the law governing a party's freedom to disclose,

which assessment should take precedence for the purposes of determining the content of the state of the art under Art 54(2) EPC?"

5.2 The respondent requested that the following questions be referred to the Enlarged Board of Appeal:

"Is it a requirement to consider any effects of national law to decide (i) whether a recipient of information is a member of the public (within the meaning of Article 54(2) EPC); and (ii) is under an obligation of confidence with respect to that information?"

If the answer to (i) or (ii) is yes, then:

- how is the applicable national law to be determined?*
- how is the relevant branch or branches of the applicable national law to be determined (e.g. patent law; the law of non-contractual obligations)?*
- if there is a conflict between the branches of the applicable national law, how is that conflict to be resolved?"*

5.3 The parties considered the questions of particular relevance in order to establish whether D17 and D26 could be considered state of the art under Article 54(2) EPC.

5.4 Under Article 112(1) (a) EPC a Board of Appeal shall refer a question to the Enlarged Board of Appeal if it considers that a decision is required.

- 5.5 In the present case however, the Board does not see a necessity for referring the questions proposed by appellant 1 and the respondent in order to reach a decision, for the following reasons.
- 5.6 Regarding D17, the Board has concluded in points 4.4.2 and 4.4.3 above that EVS was not to be regarded as member of the public in the sense of Article 54(2) EPC due its involvement in the development of a new product with the company Jakob Hatteland. This finding is independent of the fact whether an implicit or explicit obligation for individuals involved to maintain secrecy existed under the provisions of the relevant national law.
- 5.7 The questions are also not relevant for D26, since this document is not admitted into the appeal proceedings (see point 4.3.6 above).
- 5.8 The requests for referral of the questions to the Enlarged Board of Appeal are thus refused because the Board does not consider an answer by the Enlarged Board to the points raised by appellant 1 and the respondent to be required to decide the case at hand.
6. *Patent as granted (main request) - Inventive step, Articles 100(a) and 56 EPC*
- 6.1 D1 as closest prior art
- 6.1.1 The following findings of points 6.1.2 to 6.1.5 on inventive step of the subject-matter of claim 1 as granted starting from documents D1 as closest prior art correspond to the view of the Board which had been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2020 (see point 10.1

thereof). The parties have neither reacted nor objected, orally or in writing, to the opinion expressed in that communication. After having reconsidered all relevant legal and factual aspects of the case, the Board does not see any reason to deviate from its preliminary opinion and confirms it as definitive for the present decision.

- 6.1.2 The appellants argue that, to the extent that features 1.10 and 1.11 are missing from D1, the subject-matter of claim 1 as granted would be obvious in view of document D1 as closest prior art in combination with the common general knowledge (see point 7.4 of the statements of grounds of appeal of appellants 2 and 3). Indeed, once the skilled person considers the obvious and equivalent choice of providing a second set of wheels on a vehicle of D1 in order to facilitate the movement in all directions of the horizontal plane, all aspects of feature 1.10 are met. Furthermore, the second set of wheels must be at least within the bounds of the Y direction rails, and most likely above the centre of the vertical supports, thereby arriving at the subject-matter of claim 1 in an obvious manner.
- 6.1.3 In the alternative, appellants 2 and 3 additionally considered the subject-matter of claim 1 as lacking inventive step starting from D1 in combination with the teaching of either D2 or D4 solving the partial problems of providing the robot vehicle with means for movement in the Y direction (feature 1.10) and of providing a space efficient arrangement, enabling for a more compact vehicle (feature 1.11) (see point 7.5).
- 6.1.4 The Board does not find the arguments of the appellants convincing, for the following reasons.

The Board is not persuaded by the view of appellants 2 and 3 that D1 (claim 5 and paragraphs [0009] and [0021]) discloses an embodiment in which each shuttle vehicle must be capable of moving in at least two dimensions. As correctly pointed out by the respondent in the the last complete paragraph of page 9 through the first complete paragraph of page 10 of the reply to the statements of grounds of appeal, it is not disclosed in the cited references provided by appellants 2 and 3 that each of the vehicles have a bidimensional mobility, but rather that the plurality of service devices, as a whole, cover the entire plane by providing vehicles that move either in the X or in the Y direction, as it is apparent from figure 1 of D1. In consequence, contrary to the view of appellants 2 and 3 expressed in point 7.4.3 of their statements of grounds of appeal, the Board does not see that the skilled person is provided with a disclosure, hint or motivation in D1 that each of the vehicles could move in the X and Y directions.

Documents D2 and D4 might disclose a vehicle with two sets of wheels in the X and Y directions. The Board however concurs with the respondent (see last two paragraphs of page 12 of the reply to the statements of grounds of appeal) that both D2 and D4 relate to storage systems of considerably different design to D1, so that it is doubtful that the skilled person would reach to the teachings of D2 and/or D4 starting from D1 as closest prior art, especially in the absence of a clear hint to modify the mobility of the vehicles.

Even in case that the skilled person was aware of the teachings of D2 and/or D4, the Board is satisfied with the finding of the opposition division of point 5.3.3 of the reasons for the decision under appeal, that the

incorporation of the teachings of these documents would involve a major redesign of D1 which is not obvious for the skilled person.

For these reasons, the Board concludes that the subject-matter of claim 1 according to the patent as granted is inventive in view of document D1 as closest prior art in combination with either the common general knowledge or with the teachings of D2 and D4 solving partial problems.

6.1.5 For the sake of completeness, it is also agreed with the opposition division that even if a forced combination, as proposed by the appellant, could be carried out, the resulting system would still not comprise feature 1.3.

6.2 D2 as closest prior art

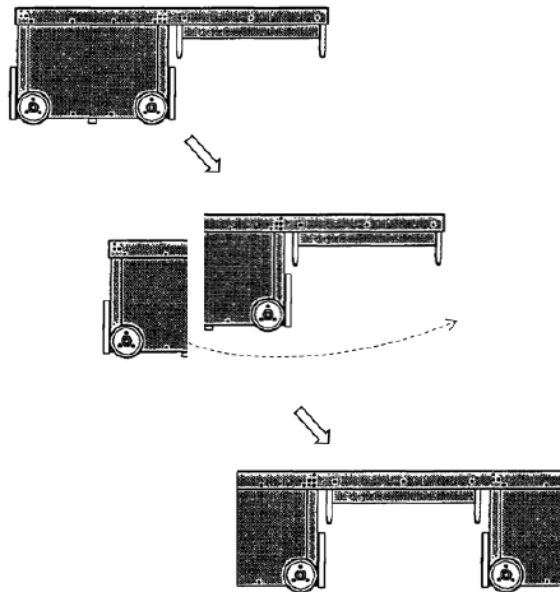
6.2.1 It is common ground that the subject-matter of claim 1 as granted differs from the known storage system of D2 at least in features 1.5, 1.7 and 1.11.

6.2.2 These distinguishing features solve, in the appellants' views, two partial unrelated problems, namely:

- improving the stability of the vehicles (feature 1.7 and thereby inherently feature 1.11); and
- providing a bin storage structure that can transport the storage bins from the vehicle support to a delivery station (feature 1.5).

6.2.3 According to the appellants, features 1.7 and 1.11 would be obvious over D2 either as a workshop modification or in light of D1. The alleged obvious and simple modification is to replicate and mirror the

vehicle module and place the remaining part of the vehicle module on one side of the formerly cantilevered region and the other replicated part on the other side of the formerly cantilevered region, such as to provide support, as illustrated below:



6.2.4 The Board disagrees. As correctly pointed out by the respondent in the third and fourth paragraphs of page 16 of the reply to the statement of grounds of appeal, the solution proposed by the appellants cannot be considered as a mere obvious or workshop modification of D2 in view of the posed problem of improving stability. Indeed, the skilled person would not consider to slice the main body of the D2 robot in half, with all the destruction that entails for the internal components and then face the modifications needed to re-construct the two halves into a working robot vehicle. A replication and mirroring of the vehicle module of one side into the other side would still be a highly complex and non-obvious modification which would amount to additional technical problems

such as increasing the number of motors and/or providing a reliable dynamic synchronisation of the wheels of one and the other side.

The Board thus concludes that the proposed modifications cannot be considered as an obvious one, let alone a workshop modification, not even in combination with the teaching of D1. The subject-matter of claim 1 as granted is considered to involve an inventive step starting from D2 as closest prior art, since features 1.7 and 1.11 are not rendered obvious by the common general knowledge or the teaching of D1.

6.2.5 As regards feature 1.5, appellants 2 and 3 argued that this feature would be rendered obvious by the teachings of any of documents D5, D6 or D22.

The Board notes that the lines of attack based on documents D6 and D22 have been raised for the first time with the statements of grounds of appeal of appellants 2 and 3. According to Article 12(6), second sentence, RPBA 2020, the Board shall not admit objections 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.

In the absence of any justifying circumstances submitted by the appellants either orally or in writing, the Board does not admit these objections into the proceedings pursuant to Article 12(6), second sentence, RPBA 2020.

However, even if the lines of attack based on documents D6 or D22 could have been considered in appeal, the question whether D5, D6 or D22 could render obvious the

bin lifting device of feature 1.5 solving a further partial unrelated problem does not need to be addressed, since features 1.7 and 1.11 are already considered enough to acknowledge the inventiveness of the subject-matter of claim 1 as granted starting from document D2 as closest prior art.

As a further consequence, the issues of the confidentiality and the status of D5 as part of the prior art does not need to be addressed.

6.3 D6 or D22 as closest prior art

6.3.1 The following findings of points 6.3.2 to 6.3.6 on inventive step of the subject-matter of claim 1 as granted starting from any of documents D6 or D22 as closest prior art correspond to the view of the Board which had been communicated to the parties with the communication pursuant to Article 15(1) RPBA 2020 (see point 10.3 thereof). The parties have neither reacted nor objected, orally or in writing, to the opinion expressed in that communication. After having reconsidered all relevant legal and factual aspects of the case, the Board does not see any reason to deviate from its preliminary opinion and confirms it as definitive for the present decision.

6.3.2 Appellants 2 and 3 argued in points 8.4.26 to 8.4.31 of their statements of grounds of appeal that the subject-matter of claim 1 according to the patent as granted would be obvious starting from any of documents D6 or D22 as closest prior art.

6.3.3 It is to be noted that the line of attack based on document D22 as closest prior art seems to have been raised for the first time in appeal. Its admittance is

thus subject to Article 12(6), second sentence, RPBA 2020.

- 6.3.4 Furthermore, the opposition division did not consider document D6 to form part of the prior art, which was contested by the appellants (see point 11 of appellant's 1 statement of grounds of appeal and point 9 of the statements of grounds of appeal of appellants 2 and 3).
- 6.3.5 However, the Board concurs with the respondent (see page 18, first paragraph) that even if D6 was to be considered as part of the prior art, it would still not disclose features such as 1.7 or 1.11, which are not obvious for similar reasons as when considering inventive step starting from D2 as closest prior art (see point 6.2 above). The same applies if the line of attack based on document D22 could be considered in appeal proceedings under Article 12(6) RPBA 2020.
- 6.3.6 It follows that the subject-matter of claim 1 according to the patent as granted is inventive in view of D6 or D22 as closest prior art.
- 6.4 D13 as closest prior art
- 6.4.1 Appellants 2 and 3 argue in point 10.3 of their respective statements of grounds of appeal that "[t]o the extent feature 1.5 is considered not to be disclosed in D13, it is nonetheless obvious in light of D5, D6 and D22", and further that "[t]he use of the vehicle of D13 in the system of D6 or D22 is also obvious. The vehicle of D13 is compatible with an X-Y grid as shown in D6 and D22, and it would be obvious to use the vehicle of D13 on either of those grids".

The Board notes that these lines of attack have been raised for the first time with the statements of grounds of appeal of appellants 2 and 3. According to Article 12(6), second sentence RPBA 2020, the Board shall not admit objections 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.

In the absence of any justifying circumstances submitted by the appellants either orally or in writing, the Board does not to admit these objections into the proceedings pursuant to Article 12(6), second sentence RPBA 2020.

6.4.2 The appellants argue that to the extent that D13 is considered not to unambiguously disclose feature 1.10, the skilled person considers the possibility of movement in both directions to be an obvious possibility or a choice between two equivalent options for the skilled person because the disclosure of D13 is directed to providing functionality that requires such movement, so that the presence of feature 1.10 and of 1.11 is an obvious arrangement contemplated by the skilled person in the light of D13 alone, or of the teaching of D2.

6.4.3 The Board disagrees. As correctly put forward by the respondent in the first complete paragraph of page 19 of the reply to the statement of grounds of appeal, the same reasoning as for D1 as outlined in 6.1.4 above could apply *mutatis mutandis* to D13 being considered as closest prior art. Indeed, the incorporation of an additional set of wheels in the transverse direction, as taught by either document D2 or the common general

knowledge, in order to arrive at the subject-matter of claim 1 as granted would require major redesign measures of the vehicle disclosed by D13 that can only be the result of an *ex post facto* analysis.

7. *Conclusion*

It follows from the above that the appellants have not submitted admissible and convincing arguments that could demonstrate the incorrectness of the findings of the opposition division that the grounds of opposition pursuant Article 100(b) EPC (sufficiency of disclosure) and 100(a) EPC (novelty and inventive step) do not prejudice the maintenance of the patent as granted. The appeals are thus to be dismissed.

Order

For these reasons it is decided that:

1. **The requests of appellant 1 and of the respondent for a referral of questions to the Enlarged Board of Appeal are refused.**
2. **The appeals are dismissed.**

The Registrar:

The Chairman:



G. Nachtigall

I. Beckedorf

Decision electronically authenticated