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**Datasheet for the decision
of 4 December 2023**

Case Number: T 1728/21 - 3.2.05

Application Number: 11813442.8

Publication Number: 2658721

IPC: B41J13/12, B41J29/02,
B41J2/165, B41J3/407

Language of the proceedings: EN

Title of invention:

Ink-jet printer for printing on cards

Patent Proprietor:

SICPA Holding SA

Opponent:

Bundesdruckerei GmbH

Relevant legal provisions:

EPC Art. 56, 83, 84, 123(2), 100(a), 100(b), 100(c)
RPBA 2020 Art. 12(2), 12(3), 12(4), 12(5), 12(6), 13(1)

Keyword:

Appeal case directed to objections on which decision was based
(no)

Late-filed objection - should have been submitted in first-
instance proceedings (yes) - circumstances of appeal case
justify admittance (no) - admitted (no)

Statement of grounds of appeal - reasons set out clearly and
concisely (yes)

Claims - clarity in opposition appeal proceedings not to be
examined in view of decision G 3/14

Sufficiency of disclosure (yes)

Inventive step (yes)

Decisions cited:

G 0003/14, T 0727/95, T 0626/14



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Case Number: T 1728/21 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 4 December 2023

Appellant:

(Opponent)

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10969 Berlin (DE)

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Respondent:

(Patent Proprietor)

SICPA Holding SA
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Representative:

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Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 July 2021 concerning maintenance of the
European Patent No. 2658721 in amended form.**

Composition of the Board:

Chairman P. Lanz
Members: M. Holz
 T. Karamanli

Summary of Facts and Submissions

- I. An opposition in the name of Bundesdruckerei GmbH was filed on 3 January 2019 by the professional representative Mr Ralf Rötter of Hentrich Patentanwälte PartG mbB (opposition 1) and a second opposition in the name of Bundesdruckerei GmbH was filed on 4 January 2019 by the professional representative Mr Thomas L. Bittner of Boehmert&Boehmert Anwaltspartnerschaft mbB (opposition 2). Hence there is only one opponent in these appeal proceedings, namely Bundesdruckerei GmbH, which was represented by two different professional representatives in the first-instance proceedings.
- II. The opponent appealed against the opposition division's decision finding that, account being taken of the amendments according to the second auxiliary request made by the patent proprietor during the opposition proceedings, European patent No. 2 658 721 ("the patent") and the invention to which it relates met the requirements of the EPC. The decision under appeal states *inter alia* that opponent 1 and opponent 2 had each filed an opposition, both opponents being the same legal entity. The opposition division held that the opposition filed on 4 January 2019 (opposition 2) was inadmissible.
- III. The following documents are cited in this decision:
- D1: WO 98/51507 A1
D3: EP 1 604 829 A2
D7: WO 2010/104136 A1
D8: EP 1 080 908 A2
D11: WO 2009/124325 A1

- D12: US 2003/234832 A1
- D13: US 2010/0253725 A1
- D14: US 2007/0035573 A1
- D15: US 2008/0143764 A1
- D16: US 2006/0290763 A1
- D18: JP 2009-6492 A
- D22: US 2002/0186276 A1
- D23: WO 98/27170 A1
- D33: Wikipedia entry "*N*-Methyl-2-pyrrolidon",
<https://de.wikipedia.org/w/index.php?title=N-Methyl-2-pyrrolidon&oldid=81966279>, last edited on 26 November 2010.
- D34: Wikipedia entry "*Glycoether*", <https://de.wikipedia.org/w/index.php?title=Glycoether&oldid=102558162>, last edited on 1 November 2019.

IV. Oral proceedings before the board were held on 4 December 2023.

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

The respondent (patent proprietor) requested that the appeal be dismissed (main request) or, as an auxiliary measure, that the decision under appeal be set aside and the patent be maintained as amended according to the claims of the auxiliary request filed with its reply to the appeal as auxiliary request 4.

V. Claim 1 of the second auxiliary request on which the decision under appeal is based (hereinafter: "second auxiliary request") reads (the feature identification

employed by the board is included in square brackets and differs from the feature identification suggested by the appellant):

"[1.0] *Ink-jet printer (1) for printing on a card (11),*
[1.1] *which card includes a thermoplastic material,*
[1.2] *the printer comprising a printing station (50)*
including:
[1.3] • *a reservoir (52) containing an ink;*
[1.4] • *at least one ink-jet printhead (51) for*
printing on the card (11), [1.5] *said at least one ink-*
jet printhead (51) being coupled to the reservoir (52);
[1.6] • *a driving system (54) adapted to drive said*
printhead (51); and
[1.7] • *a control unit (55) configured for acting*
[1.8] *on said printhead (51) for commanding ejections*
thereof, and [1.9] *on said driving system (54) for*
controlling movement of said printhead (51),
characterized in that
[1.10] *said ink comprises a medium consisting of a low-*
boiling organic solvent which medium is ethanol, an
auxiliary solvent consisting of a high-boiling organic
solvent which auxiliary solvent is able to dissolve or
to swell the thermoplastic material of the card, and a
colouring component soluble in said medium,
[1.11] *in that the driving system (54) is adapted to*
drive said printhead (51) between a first operative
condition (OC1), wherein the ink ejected by the
printhead (51) impinges on the card (11), and a second
operative condition (OC2), wherein the ink ejected by
the printhead (51) does not impinge on the card (11),
and
[1.12] *in that said control unit (55) is configured for*
commanding an ink ejection in said second operative
condition (OC2) before ink ejection in said first
operative condition (OC1)."

Claim 14 of the second auxiliary request on which the decision under appeal is based reads:

"**[14.0]** *Method for ink-jet printing on a card,
[14.1] *which card includes a thermoplastic material,*
the method comprising:
[14.2] *- providing the card (11);*
[14.3] *- providing an ink-jet printhead (51) for*
printing on said card (11), **[14.4]** *said printhead (51)*
being coupled to a reservoir (52) containing an ink,
[14.5] *said ink comprising: a medium consisting of a*
low-boiling organic solvent which medium is ethanol, an
auxiliary solvent consisting of a high-boiling organic
solvent which auxiliary solvent is able to dissolve or
to swell the thermoplastic material of the card, and a
colouring component soluble in said medium;
characterized by
[14.6] *- driving said printhead (51) between a first*
operative condition (OC1) in which the ink ejected by
the printhead (51) impinges on the card (11), and at
least a second operative condition (OC2), in which the
ink ejected by the printhead (51) does not impinge on
the card (11); and
[14.7] *- commanding ink ejection by the printhead (51)*
so that said printhead ejects ink in said second
operative condition (OC2) before ejection in said first
*operative condition (OC1)."**

VI. The parties' relevant submissions were as follows:

(a) *Grounds for opposition under Article 100(b) and (c)*
EPC

The appellant requested that the board find the grounds for opposition under Article 100(b) and (c) EPC,

including the facts and evidence relating thereto, raised in the (second) notice of opposition filed on 4 January 2019 to be part of the opposition proceedings.

(b) *Objection under Article 123(2) EPC*

(i) *Appellant*

The subject-matter of claim 1 of the second auxiliary request contained subject-matter extending beyond the content of the application as filed. The application as filed did not disclose that the reservoir (see feature 1.3) was part of a printer, let alone of a printing station (see feature 1.2). Hence the ground for opposition under Article 100(c) EPC applied. This ground for opposition had been raised in the (second) notice of opposition filed on 4 January 2019 and had been maintained throughout the opposition proceedings. This ground for opposition implied an objection under Article 123(2) EPC against claim 1 of the second auxiliary request. Explicitly raising such an objection in the opposition proceedings would only have been a repetition of what had been previously submitted regarding the ground for opposition under Article 100(c) EPC. It was apparent from point 11.11 of the communication annexed to the summons to oral proceedings before the opposition division issued on 17 June 2020 that the question of whether the second auxiliary request met the requirements of Article 123(2) EPC had been dealt with in the opposition proceedings. There were circumstances of the appeal case justifying admittance of this objection since two oppositions had been filed by the same company and one of those oppositions had been found inadmissible by the opposition division. It was *prima*

facie evident from Figure 1 of the application as filed that the reservoir was not part of the printer.

(ii) *Respondent*

The appellant had not raised an objection under Article 123(2) EPC against the second auxiliary request in the opposition proceedings. In the oral proceedings before the opposition division, the appellant had been given the floor to raise further objections against the respondent's second auxiliary request (see point 41 of the minutes). It had not raised this objection then either. This objection should therefore not be admitted into the appeal proceedings under Article 12(2), (4) and (6) RPBA (see OJ EPO 2021, A19). The circumstances of the appeal case did not justify admitting this objection. Nor was it *prima facie* relevant.

(c) *Objection under Article 83 EPC*

(i) *Appellant*

The invention defined in claims 1 and 14 of the second auxiliary request could not be carried out because the patent as a whole did not indicate what auxiliary solvent was to be selected in order to achieve the result of "swelling" the plastic material (see feature 1.10). Hence the ground for opposition under Article 100(b) EPC applied. Feature 1.10 included two alternatives referring to dissolving or swelling thermoplastic material, respectively. Similarly to the situation on which decision T 626/14 was based, the patent as a whole did not indicate what auxiliary solvent to use to achieve the result of swelling the thermoplastic material of the card. The other alternative ("to dissolve") was sufficiently disclosed.

Paragraph [0027] of the patent disclosed various auxiliary solvents. All of these auxiliary solvents could be used to dissolve thermoplastic material. However, none of these auxiliary solvents swelled thermoplastic material. As demonstrated by documents D33 and D34, the skilled person knew that glycol ether and N-methyl-2-pyrrolidone were solvents. They thus did not swell thermoplastic material. There was no auxiliary solvent that could cause PVC to swell since it was resistant to acid. As evidence for the fact that some plastic materials were resistant to swelling, it was suggested that the opinion of an expert could be commissioned by the EPO and this expert could be heard once the report had been prepared. It was only with undue burden that the skilled person could find a suitable auxiliary solvent to swell thermoplastic material. In accordance with decision T 727/95, point 7 of the Reasons, Article 83 EPC had to be interpreted as meaning that the whole subject-matter defined in the claim should be enabled without undue burden by the teaching of the patent specification. The same reasoning applied to the case at hand.

(ii) *Respondent*

The appellant had not substantiated why the decision under appeal was wrong with respect to sufficiency of disclosure. The arguments included in the statement of grounds of appeal were the same as those submitted during the oral proceedings before the opposition division. These had been addressed in the decision under appeal. The appellant had not provided any evidence for its assertion of insufficiency of disclosure. Paragraph [0027] of the patent disclosed materials that could be used as an auxiliary solvent. Materials that dissolve thermoplastic material could

also swell thermoplastic material. Swelling was a pre-stage to dissolving. The skilled person was aware that the auxiliary solvents disclosed in the patent could also be used for swelling thermoplastic material. There was no need to commission an expert opinion or to hear an expert.

(d) *Objection under Article 84 EPC*

(i) *Appellant*

Claims 1 and 14 of the second auxiliary request violated Article 84 EPC. These claims did not define the material of the auxiliary solvent, which was an essential feature. This objection could be examined in view of decision G 3/14. The lack of clarity resulted from the specification that the low-boiling organic solvent was ethanol (see feature 1.10), which was not present in the claims as granted. In view of this specification, the skilled person did not know how to choose an appropriate high-boiling organic solvent to achieve the result of dissolving or swelling the thermoplastic material of the card. This choice was all the more difficult since printer components were typically made of plastic material as well. The result of dissolving or swelling the thermoplastic material of the card could not be achieved if this material was the same as the plastic material of the printer.

(ii) *Respondent*

The appellant had failed to explain how the alleged lack of essential features in the claims was caused by amendments based on the description and not on the granted claims. Claim 1 as granted was broader than claim 1 of the second auxiliary request. The

specification that the low-boiling organic solvent was ethanol did not add vagueness to the claim. There was no scope for examining this objection under Article 84 EPC in view of decision G 3/14.

(e) *Objection under Article 56 EPC*

(i) *Appellant*

The subject-matter of claims 1 and 14 of the second auxiliary request did not involve an inventive step in view of a combination of document D1 and document D11 and any of documents D7, D8, D12 to D16 and D18. The objections of lack of inventive step in view of a combination of document D1 and document D11 and any of documents D13 to D16 and D18 had been maintained in the oral proceedings before the opposition division. Document D1 did not disclose features 1.10, 1.11 and 1.12. The partial technical problem solved in view of feature 1.10 was to provide an ink composition that was suitable for direct printing on plastic materials. The partial technical problem solved in view of features 1.11 and 1.12 was to provide an ink-jet printer that produced accurate printing results. Feature 1.10 and features 1.11 and 1.12 did not cooperate to provide a synergistic effect. Whether an ink dried quickly or slowly had no influence on the printed image, unless one wiped over the image with a finger immediately after it had been printed. Water-based inks also eventually dried and could thus provide good printing quality. It was not excluded in claim 1 that the ink, apart from ethanol, contained components that did not dry quickly. The same applied to the corresponding features 14.5, 14.6 and 14.7 of claim 14, which did not cooperate to provide a synergistic effect. Moreover, the subject-matter of claims 1 and 14

of the second auxiliary request did not involve an inventive step in view of the combination of document D3 or D22 with document D11 or D23. All facts and evidence on which these objections were based had been submitted in the (second) notice of opposition filed on 4 January 2019 and had been maintained throughout the opposition proceedings. The subject-matter of dependent claims 2 to 13 of the second auxiliary request did not involve an inventive step either.

(ii) *Respondent*

The appellant had no longer maintained the objections of lack of inventive step in view of a combination of document D1 and document D11 and any of documents D13 to D16 and D18 in the oral proceedings before the opposition division, see points 42, 49 and 50 of the minutes. These objections should not be admitted into the appeal proceedings, under Articles 13(1) and 12(2), (4) and (6) RPBA. Document D1 did not disclose features 1.10, 1.11 and 1.12 of claim 1. The same applied to the corresponding features 14.5, 14.6 and 14.7 of claim 14. There was a functional relationship between these features in that they achieved a synergistic effect. The objective technical problem solved in view of these features was how to achieve a more accurate and more durable printing result. The objections of lack of inventive step in view of the combination of document D3 or D22 with document D11 or D23 had not been raised against the second auxiliary request in the opposition proceedings. These objections should not be admitted into the appeal proceedings, under Article 12(2), (4) and (6) RPBA.

Reasons for the Decision

1. Grounds for opposition under Article 100(b) and (c) EPC

The opposition division's decision concerning the inadmissibility of opposition 2 has not been contested on appeal. Therefore there is no reason for the board to review the decision under appeal in this respect.

The appellant requests that the board find the grounds for opposition under Article 100(b) and (c) EPC, including the facts and evidence relating thereto, raised in the (second) notice of opposition of 4 January 2019 to be part of the opposition proceedings.

Although Article 100(a) EPC is not explicitly cited in the reasons for the decision under appeal, the finding in that decision that the subject-matter of claim 1 as granted did not involve an inventive step is obviously based on the ground for opposition under Article 100(a) in conjunction with Article 56 EPC. Since the patent proprietor did not file an appeal, the principle of prohibition of *reformatio in peius* (see "Case Law of the Boards of Appeal of the European Patent Office", Tenth Edition, July 2022 ["Case Law"], V.A.3.1.) applies in the case at hand. In view of this principle, the board is not in a position to review the opposition division's conclusions regarding the patent as granted, i.e. that at least one ground for opposition prejudices the maintenance of the patent as granted. In this situation, it is not appropriate for the board to examine whether the grounds for opposition under Article 100(b) and (c) EPC would also prejudice the

maintenance of the patent as granted. Consequently, there is no reason for the board to recognise by declaratory judgment that the grounds for opposition under Article 100(b) and (c) EPC, including the facts and evidence relating thereto, are part of the opposition proceedings.

Having said this, the board is of the opinion that the grounds for opposition set out in Article 100 EPC and referred to in Article 101(2) EPC are to be considered separately from the requirements of the EPC referred to in Article 101(3) EPC for the case of an amended patent, i.e. in the present case from the question of whether the patent as amended according to the second auxiliary request and the invention to which it relates meet the requirements of the EPC in view of the objections raised by the appellant.

2. **Objection under Article 123(2) EPC**

The appellant refers to the ground for opposition under Article 100(c) EPC and submits that the subject-matter of claim 1 of the second auxiliary request contains subject-matter extending beyond the content of the application as filed. In its view, the application as filed did not disclose that the reservoir (see feature 1.3) was part of a printer, let alone of a printing station (see feature 1.2). The respondent requests that this objection not be admitted into the appeal proceedings.

The board notes that, since this objection is raised against claim 1 of the patent as amended according to the second auxiliary request, Article 123(2) EPC applies and not Article 100(c) EPC.

In accordance with Article 12(6), second sentence, RPBA, the board does not admit requests, facts, objections or evidence 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.

The above objection was not raised against the respondent's second auxiliary request in the opposition proceedings. It was raised for the first time on appeal. Point 11.11 of the communication annexed to the summons to oral proceedings before the opposition division issued on 17 June 2020 generally addresses the question of whether the second auxiliary request meets the requirements of Article 123(2) EPC, but does not deal with the above objection. Moreover, the question of whether the ground for opposition under Article 100(c) EPC prejudices the maintenance of the patent as granted in view of Article 101(1) EPC is different from the question of whether the patent as amended according to the second auxiliary request and the invention to which it relates meet the requirements of the EPC in view of Article 101(3) EPC. Had the appellant wished the above objection under Article 123(2) EPC against the second auxiliary request to be examined by the opposition division, it should have raised this objection in the first-instance opposition proceedings. To avoid repetition of what had already been submitted regarding the ground for opposition under Article 100(c) EPC, the appellant could have raised an objection under Article 123(2) EPC against claim 1 of the second auxiliary request in the opposition proceedings and, to substantiate this objection, it could have referred to its submissions regarding the ground for opposition under

Article 100(c) EPC. By choosing not to raise this objection against the second auxiliary request, however, the appellant had prevented the opposition division from examining and deciding on it.

The amended claims of the second auxiliary request were filed on 25 March 2020, i.e. about one year prior to the oral proceedings before the opposition division on 16 March 2021. There was thus sufficient time for the appellant to have raised the above objection. It is also apparent from point 41 of the minutes of the oral proceedings before the opposition division that the appellant was given the opportunity to raise this objection during those oral proceedings.

The appellant thus could and should have raised the above objection under Article 123(2) EPC against the second auxiliary request in the opposition proceedings.

The appellant submits that there were circumstances of the appeal case that would justify admittance of the above objection under Article 12(6), second sentence, RPBA, since two oppositions had been filed by the same company and one of these oppositions had been found inadmissible by the opposition division.

The board does not consider these to be circumstances that would justify the admittance of this objection into the appeal proceedings. Even if the opposition division had found opposition 2 admissible, this would not alter the fact that the appellant had not raised the above objection against the second auxiliary request in the opposition proceedings.

Moreover, for the following reasons, it is not *prima facie* evident that the above objection is relevant to

the question of whether the decision under appeal should be set aside.

It is uncontested that the application as filed, on which the patent is based, discloses an ink-jet printer having all the features of claim 1 of the second auxiliary request - without the reservoir - and that the application as filed also discloses the combination of such an ink-jet printer and a reservoir. The above objection is based on the appellant's view that the application as filed did not refer to this combination as a printer or a printing station.

However, firstly, there is no technical difference, in the context of the patent in suit, between an ink-jet printer comprising a printing station including a reservoir (as defined in claim 1 of the second auxiliary request) and a combination of an ink-jet printer (that does not have a reservoir) and a reservoir (which is undisputedly disclosed in the application as originally filed). Secondly, it is common practice to use the terms "printer" and "printing station" irrespective of whether a reservoir is installed or not. This is true even if it is not explicitly stated in the application as filed and although Figure 1 of the application as filed shows a printer without a reservoir installed. In this regard, it is noted that claim 1 of the second auxiliary request does not specify that the reservoir cannot be removed or replaced.

The circumstances of the appeal case at hand do not justify the admittance of the above objection of added matter into the appeal proceedings. The board, exercising its discretion under Article 12(6), second

sentence, RPBA, decided not to admit this objection under Article 123(2) EPC into the appeal proceedings.

3. **Objection under Article 83 EPC**

The appellant refers to the ground for opposition under Article 100(b) EPC and submits that the invention defined in claims 1 and 14 of the second auxiliary request could not be carried out by a person skilled in the art because the patent as a whole did not indicate what auxiliary solvent was to be selected in order to achieve the result of swelling the plastic material (see feature 1.10).

- 3.1 The respondent is of the opinion that the appellant had not substantiated why the decision under appeal was wrong with respect to sufficiency of disclosure.

The board notes that, since this objection is directed at claims 1 and 14 of the patent as amended according to the second auxiliary request, Article 83 EPC applies, and not Article 100(b) EPC.

In accordance with Article 12(3) RPBA, the statement of grounds of appeal and the reply must contain a party's complete appeal case. Accordingly, they must set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly all the requests, facts, objections, arguments and evidence relied on. In accordance with Article 12(5) RPBA, the board has discretion not to admit any part of a submission by a party which does not meet the requirements in Article 12(3) RPBA.

The above objection under Article 83 EPC is addressed in point 18.5.1 of the Reasons for the decision under appeal. The opposition division's conclusion that the requirements of Article 83 EPC were met is based on its view that the appellant had not provided any evidence that a particular combination of plastics and "auxiliary solvent" was "outside" the scope of the claims of the second auxiliary request, nor that some combination would not achieve the desired effect. The opposition division concluded that, according to the wording of the Guidelines for Examination, F-III, 1., there were therefore no "verifiable facts" that supported the appellant's allegations.

The appellant addresses the opposition division's reasoning in this regard on pages 8 to 10 of the statement of grounds of appeal. It explains, *inter alia*, that the above objection only concerns the second alternative ("to swell") of feature 1.10. Documents D33 and D34 were referred to as evidence to support the appellant's view that the first alternative ("to dissolve") of feature 1.10 was sufficiently disclosed, but not the second alternative.

The board is thus satisfied that the appellant's submissions in the statement of grounds of appeal regarding the objection under Article 83 EPC meet the requirements of Article 12(3) RPBA. Consequently, the board has no discretion under Article 12(5) RPBA not to admit this objection into the appeal proceedings. The board notes that the question of whether the requirements of Article 12(3) RPBA are met with respect to this objection is different from the question of whether this objection is found convincing.

3.2 According to established case law (see Case Law, II.C. 9.), a successful objection of insufficient disclosure presupposes that there are serious doubts, substantiated by verifiable facts. In *inter partes* proceedings, the burden of proof initially lies with the opponent, who must establish, on the balance of probabilities, that a skilled person reading the patent, using common general knowledge, would be unable to carry out the invention.

Feature 1.10 covers two alternatives, namely that the auxiliary solvent is capable of dissolving or swelling the thermoplastic material of the card. The appellant only objects to the (second) alternative referring to an auxiliary solvent capable of swelling the thermoplastic material of the card. The appellant, however, acknowledges that the first alternative of "dissolving" is sufficiently disclosed. It alleges that the use of the auxiliary solvents disclosed in paragraph [0027] of the patent (cited in point 18.5.1 of the Reasons for the decision under appeal) could not result in swelling a thermoplastic material. Referring to documents D33 and D34, it submits that at least glycol ether and N-methyl-2-pyrrolidone were solvents and did not cause thermoplastic material to swell.

The board is not convinced by this line of argument. Neither document D33 nor document D34 addresses the question of whether glycol ether or N-methyl-2-pyrrolidone can cause thermoplastic material to swell. Nor is this implied by the mere fact that these substances can be used as solvents. The appellant has not sufficiently demonstrated that the auxiliary solvents disclosed in paragraph [0027] of the patent could not cause thermoplastic material to swell. Moreover, even assuming that this were the case, this

would not imply that auxiliary solvents capable of swelling thermoplastic material would not be known to the skilled person from their common general knowledge. Nor has the appellant convincingly demonstrated that the skilled person would not have been aware of an auxiliary solvent that could cause PVC to swell. This cannot be derived from the appellant's submission that PVC was acid-resistant.

The appellant submits that the invention defined in claims 1 and 14 of the second auxiliary request could not be carried out by the person skilled in the art, since - in accordance with decision T 626/14 - the patent specification as a whole did not indicate which auxiliary solvent was to be selected in order to achieve the result of "swelling" the plastic material.

Decision T 626/14, however, is based on different facts from those of the case at hand. It therefore cannot be inferred from the cited decision that the patent in suit does not indicate which auxiliary solvent is to be selected in order to achieve the result of "swelling" the plastic material. The finding in decision T 626/14 according to point 1.4 is not only based on the deciding board's view that the patent in suit lacked an indication of what the pressure should be in order to enable a reliable and repeatable thickness measurement to be made. The cited passage also explicitly states that the defined parameter was lacking a sufficiently defined technical meaning within the technical field concerned. However, the issue at hand does not hinge on the question of whether a parameter that is not defined in the patent has a defined technical meaning in the art. In the case at hand, the appellant has not set out what the skilled person's common general knowledge regarding the ability of solvents to swell

thermoplastic material would entail. It is not sufficient in this regard merely to allege that the patent itself did not disclose any auxiliary solvent that would be capable of swelling thermoplastic material.

Nor is decision T 727/95 relevant in this regard. The appellant has not convincingly demonstrated that the skilled person would be able to find auxiliary solvents capable of swelling thermoplastic material only with undue burden. Decision T 727/95 is not concerned with swelling of thermoplastic material. In point 11 of the Reasons of that decision, the board concluded that finding other stable, cellulose high-producing *Acetobacter* strains in nature was a chance event and relying on chance for reproducibility amounted to undue burden in the absence of evidence that such chance events occurred and could be identified frequently enough to guarantee success. This reasoning, however, does not have any bearing on the case at hand.

The appellant suggests that, as evidence for the alleged fact that some plastic materials were resistant to swelling, the opinion of an expert could be commissioned by the EPO and this expert could be heard once the report had been prepared.

In accordance with the case law cited above, however, the burden of proof initially lies with the opponent, who must establish, on the balance of probabilities, that a skilled person reading the patent, using common general knowledge, would be unable to carry out the invention. The burden of proof of insufficiency is thus as a general rule on the opponents, who should prove that despite making all reasonable efforts they were unable to put the invention into practice (see Case

Law, III.G.5.1.2c)). It is not the board's responsibility to provide evidence for factual allegations made by the appellant.

Moreover, claim 1 of the second auxiliary request does not require the auxiliary solvent to be able to swell each and every conceivable thermoplastic material. In contrast, it is required that the auxiliary solvent be able to dissolve or to swell the thermoplastic material of the card. Feature 1.10 can be understood as specifying that the same auxiliary solvent (i.e. in the context of the same embodiment) is able to dissolve or swell the thermoplastic material of the card. The appellant acknowledges that the skilled person is aware of auxiliary solvents that are able to dissolve thermoplastic material. Moreover, the appellant does not contest that the skilled person would be aware of substances that swell thermoplastic material and could thus be used as an auxiliary solvent. The appellant's allegation that some plastic materials were resistant to swelling is therefore not pertinent, as this would not imply that the skilled person would not be aware of compositions that are able to swell (at least some sort of) thermoplastic material and can thus be used as auxiliary solvents. Nor does the appellant's allegation imply that the skilled person would not be aware of auxiliary solvents able to dissolve thermoplastic material.

The respondent's second auxiliary request thus meets the requirements of Article 83 EPC.

4. **Objection under Article 84 EPC**

In accordance with decision G 3/14 (OJ EPO 2015, 102), in considering whether, for the purposes of

Article 101(3) EPC, a patent as amended meets the requirements of the EPC, the claims of the patent as amended may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that the amendment introduces non-compliance with Article 84 EPC.

The appellant submits that claims 1 and 14 of the second auxiliary request lacked an essential feature since these claims did not specify the material of the auxiliary solvent.

The board notes that claims 1 and 16 as granted require an auxiliary solvent consisting of a high-boiling organic solvent, the boiling point of which is higher than that of a medium consisting of a low-boiling organic solvent, and that the auxiliary solvent be able to dissolve or to swell the thermoplastic material of the card. The only feature included in claims 1 and 14 of the second auxiliary request in this regard that is not present in the claims as granted is the definition that the medium (consisting of the low-boiling organic solvent) is ethanol. This amendment affects the skilled person's freedom of choice regarding the auxiliary solvent, since its boiling point should be higher than that of ethanol. This, however, does not imply that this amendment introduces a lack of clarity.

The feature the absence of which from claims 1 and 14 of the second auxiliary request is objected to by the appellant (i.e. the material of the auxiliary solvent) is also absent in claims 1 and 16 as granted. Moreover, if the appellant's view that the specification of the material of the auxiliary solvent is essential was correct, the board sees no reason why this feature

would not be essential to the invention defined in claims 1 and 16 as granted.

In a further aspect, claims 1 and 16 as granted also cover embodiments in which the low-boiling organic solvent is ethanol. Claim 13 as granted specifies that the medium is selected from the group of alcohols. If the choice of ethanol as the low-boiling organic solvent gave rise to a lack of clarity, the same lack of clarity would also be present in the claims as granted and would not be introduced by the above claim amendment. The appellant's considerations are furthermore not specifically linked to the selection of ethanol as low-boiling organic solvent. They would similarly apply to claims 1 and 16 as granted, irrespective of whether ethanol or any other material was selected for the low-boiling organic solvent. Therefore the appellant's considerations apply to claims 1 and 16 as granted too.

Consequently, the specification that the medium is ethanol (see features 1.10 and 14.5) does not introduce non-compliance with Article 84 EPC. The appellant's objection under Article 84 EPC can therefore not be examined in view of decision G 3/14.

5. Objections under Article 56 EPC

5.1 Inventive step in view of a combination of document D1 and document D11 and any of documents D7, D8, D12 to D16 and D18

The appellant submits that the subject-matter of claims 1 and 14 of the second auxiliary request did not involve an inventive step in view of a combination of

document D1 and document D11 and any of documents D7, D8, D12 to D16 and D18.

- 5.1.1 The respondent, referring to points 42, 49 and 50 of the minutes, takes the view that the appellant had no longer maintained the objections of lack of inventive step in view of a combination of document D1 and document D11 and any of documents D13 to D16 and D18 in the oral proceedings before the opposition division. In its view, these objections should not be admitted into the appeal proceedings, under Articles 13(1) and 12(2), (4) and (6) RPBA.

The board, however, cannot derive from points 42, 49 and 50 of the minutes of the oral proceedings before the opposition division that the above objections were no longer maintained by the appellant. Moreover, from point 18.6 of the Reasons for the decision under appeal, it is apparent that the opposition division considered the objections of lack of inventive step in view of document D1 together with document D11 and with any of documents D7, D8, D12 to D16 and D18 to be part of the opposition proceedings at the time the decision under appeal was taken.

The objections based on the combination of documents D1 with D11 and any of documents D7, D8, D12 to D16 and D18 raised in the statement of grounds of appeal therefore meet the requirements of Article 12(2) RPBA. The provisions of Article 12(4) and (6), second sentence, RPBA as well as Article 13(1) RPBA thus obviously do not apply.

- 5.1.2 It is common ground between the parties that document D1 does not disclose features 1.10, 1.11 and 1.12 and features 14.5, 14.6 and 14.7.

5.1.3 It is, however, under dispute between the parties whether these differentiating features interact synergistically or whether they solve mutually different partial technical problems.

Feature 1.10 specifies, *inter alia*, that the ink comprises an auxiliary solvent consisting of a high-boiling organic solvent which auxiliary solvent is able to dissolve or to swell the thermoplastic material of the card. The technical effect with respect to this part of feature 1.10 is that the ink becomes integral with the card and that the printing result (that is caused by dissolving or swelling the material of the card) is not prone to blurring and is therefore more accurate. Feature 1.10 also specifies that the ink comprises a medium consisting of a low-boiling organic solvent which medium is ethanol. This definition gives rise to the technical effect of dissolving the components of the ink and sustaining the formation of the ink bubbles (see paragraph [0023] of the patent) and thus also contributes to a more accurate printing result.

However, the use of the kind of ink defined in feature 1.10 has the technical drawbacks described in paragraphs [0004] and [0005] of the patent:

"These kind of inks evaporate extremely quickly. Therefore, after a very short time after an ink ejection, portions of dried ink can be detected on the nozzle plate, and in particular in the nozzles. The ink droplets subsequently ejected by the same nozzles hit these portions of dried ink and change their direction accordingly. This causes problems in term [sic] of printing quality, since the ink

droplets do not land on the expected spot of the card to be printed, and the results of the printing operation is [sic] consequently different from the desired one."

Features 1.11 and 1.12 allow the nozzle to be cleaned to overcome these drawbacks of the kind of ink defined in feature 1.10. Features 1.11 and 1.12 thus further contribute to the technical effect of allowing a more accurate printing result.

The above reasoning does not necessarily rely on the assumption that the use of ethanol leads to an accurate printing result because it dries quickly. The reason that the use of ethanol does so in the context of claim 1 is that it dissolves the components of the ink and sustains the formation of the ink bubbles. Hence the question of whether an ink that dries quickly can lead to a more accurate printing result is not pertinent to the issue at hand. The same is true of the appellant's submission that water-based inks also dried eventually and could thus provide good printing quality.

The appellant submits that it was not excluded in claim 1 that the ink, apart from ethanol, contained components that did not dry quickly. It is, however, undisputed that at least the ethanol contained in the ink dries quickly. This has the above technical drawback that the nozzle may be clogged. Such clogging may occur even if not all the components of the ink evaporate as quickly as ethanol. Features 1.11 and 1.12 alleviate this drawback by allowing the nozzle to be cleaned.

Features 1.10, 1.11 and 1.12 of claim 1 of the second auxiliary request are thus functionally interdependent and provide a synergistic effect, so the objective technical problem is how to achieve a more accurate printing result. The same applies to features 14.5, 14.6 and 14.7 of independent claim 14 of the second auxiliary request.

All objections of lack of inventive step in view of document D1 as closest prior art raised by the appellant are based on the appellant's view that feature 1.10 and features 1.11 and 1.12 solved mutually different partial technical problems. Since the board, however, considers these features to be functionally interdependent and to provide a synergistic effect, the formulation of partial technical problems is not appropriate. The appellant has not convincingly demonstrated that the skilled person starting from document D1 and trying to solve the above objective technical problem of how to achieve a more accurate printing result would have arrived at the subject-matter of claims 1 and 14 of the second auxiliary request in an obvious manner.

The subject-matter of claims 1 and 14 is therefore based on an inventive step within the meaning of Article 56 EPC in view of document D1 as closest prior art.

5.2 Further objections under Article 56 EPC

The appellant raises further objections of lack of inventive step against claims 1 and 14 of the second auxiliary request in view of the combination of document D3 or D22 with document D11 or D23. The

respondent requests that these objections not be admitted into the appeal proceedings.

In accordance with Article 12(6), second sentence, RPBA, the board does not admit requests, facts, objections or evidence 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.

The appellant takes the view that all facts and evidence on which the above objections were based had been submitted in the second notice of opposition on 4 January 2019 and had been maintained throughout the opposition proceedings.

The board, however, notes that the above objections against claims 1 and 14 of the second auxiliary request had not been raised in the opposition proceedings although the appellant had had ample opportunity to do so. The second auxiliary request had been filed on 25 March 2020 (i.e. about one year prior to the oral proceedings before the opposition division). In point 11.12 of its preliminary opinion of 17 June 2020, the opposition division explained that, at that stage of the proceedings, it was of the opinion that the subject-matter of claim 1 of the second auxiliary request seemed to involve an inventive step. In a letter of 15 January 2021, the respondent raised objections under Article 56 EPC against claims 1 to 14 of the second auxiliary request, but did not raise any of the further objections of lack of inventive step indicated above. On a further occasion, having been given the floor in the oral proceedings before the opposition division to raise further objections against

the second auxiliary request (see point 41 of the minutes), it raised objections of lack of inventive step. These, again, did not include the above further objections.

In view of the above, the appellant could and should have raised all objections against the claims of the second auxiliary request that it considered appropriate in the opposition proceedings. This also applies to the above further objections under Article 56 EPC.

The appellant's submission that all facts and evidence on which the above objections were based had been submitted in the second notice of opposition on 4 January 2019 and had been maintained throughout the opposition proceedings concerns the patent as granted and thus does not pertain to circumstances of the appeal case that would justify admittance of these objections.

The board, exercising its discretion under Article 12(6), second sentence, RPBA, therefore decided not to admit the objections of lack of inventive step based on the combination of document D3 or D22 with document D11 or D23.

5.3 Summary regarding claims 1 and 14 of the second auxiliary request

The subject-matter of claims 1 and 14 is based on an inventive step within the meaning of Article 56 EPC.

5.4 Dependent claims of the second auxiliary request

By virtue of their reference to claim 1, dependent claims 2 to 13 include all the features of claim 1 of

the second auxiliary request. The subject-matter of dependent claims 2 to 13 of the second auxiliary request involves an inventive step at least for the reasons set out above with respect to claim 1 of the second auxiliary request.

6. **Conclusions**

None of the appellant's objections examined by the board allows the conclusion that the patent as amended according to the second auxiliary request and the invention to which it relates do not meet the requirements of the EPC. The appeal therefore has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



D. Hampe

P. Lanz

Decision electronically authenticated