**Internal distribution code:**

(A) [ - ] Publication in OJ
(B) [ - ] To Chairmen and Members
(C) [ - ] To Chairmen
(D) [ X ] No distribution

# Datasheet for the decision of 19 January 2024

**Case Number:** T 0553/22 - 3.2.05

**Application Number:** 12753293.5

**Publication Number:** 2744665

**IPC:** B41J25/312, B41J33/14, B41J33/54, B41J33/34, B41J33/36, B41J35/36, B41J2/325

**Language of the proceedings:** EN

**Title of invention:**
Thermal transfer printer

**Patent Proprietor:**
Videojet Technologies Inc.

**Opponent:**
Dover Europe Sarl

**Relevant legal provisions:**
EPC Art. 54, 56, 83, 123(2)
RPBA 2020 Art. 12(1)(c), 12(4), 12(6), 13(1), 13(2)

**Keyword:**
Late filing of the opponent's reply to the patent proprietor's statement of grounds of appeal - admitted (yes)
Amendments allowable (yes) - new objection - admitted (no)
Sufficiency of disclosure (yes) - new objection - admitted (no)
Novelty (yes)
Inventive step (yes) - new objection - admitted (no)

**Decisions cited:**
G 0003/14, T 0345/90, T 0701/91, T 2638/16

Europäisches Patentamt
European Patent Office
Office européen des brevets

**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

**Case Number: T 0553/22 - 3.2.05**

# D E C I S I O N
# of Technical Board of Appeal 3.2.05
# of 19 January 2024

| | |
|---|---|
| **Respondent:** (Patent Proprietor) | Videojet Technologies Inc.<br>1500 Mittel Boulevard<br>Wood Dale, IL 60191 (US) |
| **Representative:** | Marks & Clerk LLP<br>15 Fetter Lane<br>London EC4A 1BW (GB) |
| **Appellant:** (Opponent) | Dover Europe Sarl<br>Chemin de Blandonnet 10<br>1214 Vernier (CH) |
| **Representative:** | Forresters IP LLP<br>Skygarden<br>Erika-Mann-Straße 11<br>80636 München (DE) |
| **Decision under appeal:** | **Interlocutory decision of the Opposition Division of the European Patent Office posted on 16 December 2021 concerning maintenance of the European Patent No. 2744665 in amended form.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | P. Lanz |
| **Members:** | B. Spitzer |
| | F. Blumer |

## Summary of Facts and Submissions

I. Both the patent proprietor and the opponent lodged an appeal against the opposition division's interlocutory decision finding that the European patent No. 2 744 665 (the patent) as amended according to the second auxiliary request met the requirements of the EPC.

II. The opposition was filed against the patent as a whole based on the grounds for opposition set out in Article 100(a) (lack of novelty and lack of inventive step), Article 100(b) and Article 100(c) EPC.

III. The patent proprietor's statement of grounds of appeal was notified to the opponent by a communication dated 4 May 2022. The opponent's reply was received by the board on 15 September 2022.

IV. In a communication under Article 15(1) RPBA dated 30 November 2023, the board set out its preliminary opinion on the case.

V. Oral proceedings before the board were held on 19 January 2024 in hybrid format in accordance with Article 15a(2) RPBA.

VI. During the oral proceedings the patent proprietor withdrew its appeal and from then on only had the procedural status of a respondent.

VII. Final requests

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

No. 2 744 665 be revoked. The opponent further requested that the seventh to the twenty-first auxiliary requests not be admitted into the proceedings.

The respondent (patent proprietor) requested that the appeal of the opponent be dismissed (i.e. that the patent be maintained on the basis of the claims found to be allowable by the opposition division, re-filed as sixth auxiliary request with the patent proprietor's grounds of appeal) or that the decision under appeal be set aside and the patent be maintained on the basis of one of the seventh to fourteenth auxiliary requests as filed with the reply to the opponent's grounds of appeal or on the basis of one of the fifteenth to twenty-first auxiliary requests as filed with letter dated 12 January 2024.

VIII. The documents referred to during the appeal proceedings include the following:

D1: EP 1 066 975 A1
D2: US 2006/0115310 A1
D9: US 5,631,688

IX. Independent claims 1 and 10 of the second auxiliary request found to be allowable by the opposition division and re-filed as the sixth auxiliary request with the patent proprietor's statement of grounds of appeal (hereinafter: the sixth auxiliary request) are worded as follows (feature references in square brackets):

"**[1a]** 1. A thermal transfer printer comprising:
**[1b]** first and second spool supports (8, 12) each being configured to support a spool of ribbon (6);

**[1c]** a ribbon drive configured to cause movement of ribbon from the first spool support (8) to the second spool support (12);
**[1d]** a printhead (4) configured to selectively transfer ink from the ribbon to a substrate (13); **[1e]** a motor (46) coupled to the printhead and arranged to vary the position of the printhead relative to a surface against which printing is carried out to thereby control the pressure exerted by the printhead on the surface; and characterized by **[1f]** a monitor arranged to monitor whether the printhead has arrived in a predetermined position relative to the surface; wherein:
**[1h]** the printhead (4) is rotatable about a pivot (40; 40a) and the motor (46) is arranged to cause rotation of the printhead about the pivot to vary the position of the printhead relative to the surface;
**[1i]** the motor (46) is coupled to the printhead (4) via a belt (32); and,
**[1j]** the belt passes around a roller driven (48) by the motor and a further roller (51) such that rotation of the motor causes movement of the belt, movement of the belt causing the rotation of the printhead about the pivot; and further wherein:
**[1k]** the belt moves along an at least partially linear path, the printhead being mounted to a component (42) coupled with the belt (32) and configured for movement with the belt along the path wherein the movement of the component along the path causes rotation of the printhead (4) about the pivot(40);
or
**[1l]** the belt passes around the further roller (51), the pivot (40a) being coaxial with the further roller."

"**[12a]** 10. A thermal transfer printer comprising:
**[12b]** first and second spool supports (8, 12) each being configured to support a spool of ribbon;

**[12c]** a ribbon drive configured to cause movement of ribbon (6) from the first support (8) to the second spool support (12); **[12d]** a printhead (4) configured to selectively transfer ink from the ribbon (6) to a substrate (13); **[12e]** a first and second motor (14, 15); **[12f]** a printhead drive mechanism for transporting the printhead along a track (22) extending generally parallel to the predetermined substrate transport path and for displacing the printhead into and out of contact with the ribbon; and **[12g]** a printhead pressure control mechanism for controlling the pressure of the printhead against the ribbon and the substrate along a plurality of discrete pressure settings."

X. The parties' submissions relevant to this decision may be summarised as follows.

(a) Late filing of the opponent's reply to the patent proprietor's statement of grounds of appeal

(i) Appellant (opponent)

The board's intention, as expressed in its communication under Article 15(1) RPBA, to use its discretion under Article 13(1) RPBA to take the opponent's reply to the patent proprietor's statement of grounds of appeal into account was appreciated.

(ii) Respondent (patent proprietor)

The opponent's reply to the patent proprietor's statement of grounds of appeal was filed after the expiry of the period prescribed in Article 12(1) c) RPBA. Therefore, this submission should be treated as an amendment to the opponent's appeal case in accordance with Article 13(1) RPBA.

Since the opponent had not provided any justification for filing this submission late, the board should exercise its discretion not to admit the submission.

(b) Amendments to claim 6 of the sixth auxiliary request

(i) Appellant (opponent)

Claim 6 of the sixth auxiliary request corresponded to claim 8 as granted, in which the features of dependent claims 9 to 13 as originally filed were combined via "and, optionally,". The expression "and, optionally," had to be interpreted such that the features were claimed in a sequential order. This sequential series of features had no basis in the application as originally filed. Claim 13 as originally filed depended on claim 10 or 12 as originally filed, i.e. the parameter indicative of the power supply was the power supplied to the motor or the power supplied to the motor drive circuit, respectively. Claim 14 as originally filed, which is dependent on claim 13, claimed that the controller was configured to compare the monitored parameter with a threshold. This monitored parameter could not be two different parameters at the same time. However, claim 6 of the sixth auxiliary request combined the two alternatives of claim 13 as originally filed. There was no basis in the application as filed for the parameter to be the power supplied to the motor (dependent claim 10 as originally filed) and at the same time the power supplied to the motor drive circuit (dependent claim 12 as originally filed). Therefore, claim 6 of the sixth auxiliary request did not fulfil the requirements of Article 123(2) EPC.

(ii) Respondent (patent proprietor)

Claim 6 of the sixth auxiliary request combined the features of dependent claims 9 to 13 as originally filed via "and, optionally". These claims as originally filed were a direct and unambiguous disclosure of the sequential combination of features of claim 6 of the sixth auxiliary request, in particular also disclosure of the combination of all the features of that claim. Dependent claim 13 as originally filed depended on claim 10 or claim 12 as originally filed. Therefore, in one alternative, the feature that the controller was configured to monitor the power supplied by monitoring a parameter indicative of the power supplied (claim 13 as originally filed) depended directly on the feature that the parameter was the power supplied to the motor (claim 10 as originally filed), which in turn depended on the feature that the controller was configured to monitor a parameter of the motor (claim 9 as originally filed). In the other alternative, the feature that the controller was configured to monitor the power supplied by monitoring a parameter indicative of the power supplied (claim 13 as originally filed) depended, for a stepper motor, on the feature that the controller was configured to monitor the power supplied to the motor drive circuit (claim 12 as originally filed) and, via claim 11 as originally filed, on the feature that the parameter was the power supplied to the motor (claim 10 as originally filed), as well as on the feature that the controller was configured to monitor a parameter of the motor (claim 9 as originally filed). The opponent's argument that the two alternatives excluded each other was a clarity objection, not an objection under Article 123(2) EPC. There was a direct and unambiguous disclosure not only in the dependent claims as originally filed but also in paragraph [0015] of the

application as originally filed. This paragraph disclosed that the power supplied to the motor drive circuit was substantially the same as the power supplied to the motor.

(c) Admittance of further objections under Article 123(2) EPC against claim 1 of the sixth auxiliary request

(i) Appellant (opponent)

Claim 1 of the sixth auxiliary request did not fulfil the requirements of Article 123(2) EPC. Firstly, including the two alternative features 1k and 1l in claim 1 of the sixth auxiliary request, based on claims 5 and 6 as originally filed and linked by "or", was an unallowable intermediate generalisation. Dependent claims 5 and 6 as originally filed depended on all of claims 1 to 4 as originally filed. Secondly, omitting the feature "*wherein the motor is coupled to the printhead via a flexible linkage*" when incorporating claim 5 as granted into claim 1 of the sixth auxiliary request led to an unallowable amendment.

These objections had been raised for the first time with the opponent's statement of grounds of appeal and with its letter dated 18 December 2023, respectively. Since these arguments were made in reply to the patent proprietor's appeal case, they should be admitted under Article 12(4) and (6) RPBA and Article 13(2) RPBA.

(ii) Respondent (patent proprietor)

The additional two objections raised by the opponent under Article 123(2) EPC against claim 1 of the sixth

auxiliary request were not part of the decision under appeal and should not be admitted under Article 12(4) and (6) RPBA and Article 13(2) RPBA, respectively. Furthermore, there were no circumstances of the appeal case which justified their admittance. The second auxiliary request considered in the decision under appeal, i.e. the sixth auxiliary request in the appeal proceedings, had been filed as the tenth auxiliary request on 22 July 2021, before the final date for making written submissions as per Rule 116 EPC. The opponent could and should have filed these objections at the oral proceedings before the opposition division.

(d) Sufficiency of disclosure of claims 1 and 10 of the sixth auxiliary request and admittance of the insufficiency objection against claim 6 of the sixth auxiliary request

(i) Appellant (opponent)

Claims 1, 6 and 10 of the sixth auxiliary request did not fulfil the requirements of Article 83 EPC.

The patent should be justified by the technical contribution to the art, ensuring that the person skilled in the art can implement the invention over the whole scope of the claims. This was not the case for the subject-matter of claim 1 of the sixth auxiliary request. According to feature 1f of claim 1 of the sixth auxiliary request, a monitor was arranged to monitor whether the printhead had arrived in a predetermined position relative to the surface. In the patent, motor monitoring parameters were concerned with determining contact and/or pressure between the printhead and the substrate/platen rather than being able to determine whether the printhead had arrived in

a predetermined position relative to the surface against which printing was carried out. The patent did not disclose how to determine whether the printhead had reached a predetermined position when it was not in contact with the surface. Paragraphs [0067], [0070] and [0081] and Figures 8 and 9 of the patent only disclosed a printhead position in relation to the pressure applied to the platen by the printhead. Therefore, the subject-matter of claim 1 of the sixth auxiliary request was not disclosed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art over the whole scope claimed.

Claim 6 of the sixth auxiliary request was insufficiently disclosed because it was not feasible to monitor both the power supplied to the motor and the power supplied to the motor drive circuit. This objection had been filed for the first time with the statement of grounds of appeal and should be admitted under Article 12(4) and (6) RPBA for the following reasons. The oral proceedings before the opposition division had been postponed due to COVID from 13 October 2020 to 22 September 2021, so the patent proprietor had had ample time to file auxiliary requests before the second arranged date for the oral proceedings. However, the request concerned had been filed on the last day of the deadline under Rule 116 EPC for the postponed oral proceedings. Consequently, this request was discussed for the first time during the oral proceedings before the opposition division. It was already late in the day when the second auxiliary request (now the sixth auxiliary request) had been discussed. These circumstances of the appeal case justified the admittance of the insufficiency objections against claim 6 of the sixth auxiliary request, which corresponded to claim 8 as granted. The

objection that claim 8 as granted was insufficiently disclosed had already been mentioned in the notice of opposition.

Claim 10 of the sixth auxiliary request did not fulfil the requirements of Article 83 EPC. According to paragraphs [0081] to [0083] of the patent, only a single pressure was to be achieved. Therefore, feature 12g of claim 10 of the sixth auxiliary request, according to which a printhead pressure against the ribbon and the substrate was controlled along a plurality of discrete pressure settings, was insufficiently disclosed. Discrete pressure settings were only disclosed in the context of a closed-loop control. However, a step in a closed-loop control to achieve a single pressure value was different from a plurality of discrete pressure settings.

Furthermore, the whole invention was disclosed in relation to stepper motors. The Guidelines for Examination in the European Patent Office, F-IV, 6.4 taught that if an essential feature was absent from the claims, and no information was given on how to perform the claimed invention successfully without using said feature, the description did not disclose the invention defined in the claims in the manner prescribed by Article 83 EPC. The person skilled in the art was not taught how to carry out the invention with other motors. Since steps were inherent to carrying out the invention, a stepper motor was an essential feature which was missing from claim 10 of the sixth auxiliary request, thus resulting in insufficiency of disclosure.

(ii) Respondent (patent proprietor)

Claim 1 of the sixth auxiliary request was sufficiently disclosed. The description did not disclose that the printhead had to contact the surface to monitor whether the printhead had arrived in a predetermined position relative to the surface. The patent provided teaching on how to monitor a printhead position by a number of steps of the motor. This could be accomplished regardless of whether the printhead had contacted the surface.

The insufficiency objection against claim 6 of the sixth auxiliary request was late-filed. It should have been raised in the first-instance proceedings, especially because claim 6 of the sixth auxiliary request corresponded to claim 8 as granted. No insufficiency objection against claim 8 as granted had been raised in the notice of opposition. Moreover, it was not insufficiency but at most a clarity issue, which was not to be examined since it was already present in the claims as granted.

Moreover, claim 10 of the sixth auxiliary request was sufficiently disclosed. Paragraphs [0081] to [0083] of the patent explained how to vary the printhead pressure. Paragraphs [0064], [0065], [0075] and [0076] of the patent explained the closed-loop control: if the print was too light the pressure was increased, and if the print was too dark the pressure was reduced. Paragraph [0076] of the patent disclosed that the "*printhead pressure can be adjusted in response to the feedback signals so as to continuously deliver printhead pressure that in turn delivers adequate slip mode printing of acceptable quality images throughout the operational run of the printer*".

Contrary to the opponent's assertions, a stepper motor was not the only possible motor. Different types of motors, such as DC motors, as illustrated in the patent, could be used.

The passage of the Guidelines for Examination cited by the opponent only applied "*where a technical feature is described and highlighted in the description as being an essential feature of the invention*". However, the description did not describe a point of contact for claim 1 or the presence of a stepper motor for claims 1 or 10 of the sixth auxiliary request as being essential features at any point.

(e) Novelty of the subject-matter of claim 10 of the sixth auxiliary request (Article 54 EPC)

(i) Appellant (opponent)

The subject-matter of claim 10 of the sixth auxiliary request was not new over document D2 since it anticipated the disputed feature 12g. Document D2 disclosed a pressure setting for different thicknesses and, like the patent, was concerned with the quality of the print. Document D2 had a sensor which detected a thicker portion of the substrate, e.g. a seam, and controlled the position of the printhead to achieve a desired printing pressure. Document D2 also disclosed discrete printhead positions 12 and 12a, as well as controlling the actuator 35 to move the printhead and the mounting structure to a further discrete position 12b (see document D2, paragraphs [0041] and [0042], Figure 1). This meant that the pressure at position 12a might be lower than at position 12 and that the pressure at position 12b might be zero. This

corresponded to a plurality of discrete pressure settings. There was no limitation in claim 10 of the sixth auxiliary request that one of the plurality of discrete pressure settings might not be zero or that there was contact between the printhead and the substrate.

The subject-matter of claim 10 of the sixth auxiliary request was not new over document D9 either. Concerning the disputed features 12f and 12g, it was sufficient if the thermal transfer printer was suitable for transporting the printhead along a track extending generally parallel to the predetermined substrate transport path. Lines 25 to 52 of column 3 of document D9 explained that a guide shaft 3 on which the carriage 4 was mounted and could be reciprocated was parallel to the platen 2. Although the paper/substrate was not shown in document D9, the printhead was clearly described as moving along a guide shaft which was parallel to the platen, so the printer was per se suitable for transporting the printhead according to feature 12f. With regard to the disputed feature 12g, document D9 disclosed different modes with different pressures. Since column 4, lines 65 to 67 of document D9 disclosed that a plurality of ribbon cassettes 5a and 5b were arranged in the printer, the printer of document D9 could apply different pressures to different ribbons. Claim 10 of the sixth auxiliary request was not limited to one ribbon. Column 8, lines 12 et seq. of document D9 disclosed a control system. Since claim 10 of the sixth auxiliary request was silent on the kind of control, it was irrelevant whether the control in document D9 was automatic or manual.

(ii) Respondent (patent proprietor)

The subject-matter of claim 10 of the sixth auxiliary request differed from document D2 on account of feature 12g. Document D2 did not disclose any pressure setting. The three different positions 12, 12a and 12b referred, respectively, to an extended position, in which the printhead was in contact with the substrate, and to a retracted position and a further retracted position (see document D2, paragraph [0044]). Positions 12a and 12b were not different pressure settings since they did not contact the substrate. Only in position 12, when the printhead contacted the surface, was "some pressure" exerted onto the substrate (see document D2, paragraph [0049]). This did not correspond to feature 12g of claim 10 of the sixth auxiliary request, which claimed a plurality of discrete pressure settings of the printhead against the ribbon and the substrate.

Document D9 did not disclose features 12f and 12g, and therefore the subject-matter of claim 10 of the sixth auxiliary request was new over document D9. Document D9 did not teach how the substrate was transported. However, a review of Figure 2 and column 4, lines 51 to 60 of document D9 shows that the canopy 19 was capable of being opened and closed and used as a paper presser. Consequently, in Figure 1 of document D9 the paper was transported in a direction perpendicular to the page, and thus feature 12f was not anticipated by document D9.

Feature 12g was not disclosed in document D9 either. In claim 10 of the sixth auxiliary request, the pressure of the printhead was controlled against the ribbon and the substrate along a plurality of discrete pressure settings, unlike in document D9 where the pressure was

regulated against a plurality of ribbons.

(f) Inventive step of the subject-matter of claim 10 of the sixth auxiliary request (Article 56 EPC) and admittance of the inventive step objection starting from document D1 in combination with the common general knowledge

(i) Appellant (opponent)

The subject-matter of claim 10 of the sixth auxiliary request was not inventive over a combination of documents D2 and D1. Starting from document D2, the distinguishing feature was feature 12g, the technical effect of which was to ensure an acceptable print quality. The objective technical problem was how to ensure an acceptable print quality.

Document D1 disclosed feature 12g since there was a control, especially a closed-loop control system, and a correlation of the printhead position with the desired pressure (see document D1, paragraphs [0007] and [0010]). This was disclosed in detail in paragraphs [0031] and [0032] and claims 10, 11 and 16 of document D1, i.e. the printer circuitry 44 calculated the desired pressure for the ink ribbon/labelling media combination on the basis of the desired pressures. The axial position of the shaft 134, and thus the position of the printhead, was determined using a linear potentiometer. The relationship between the shaft position and the platen pressure was stored in the printer circuitry 44. Therefore, document D1 disclosed feature 12g in the sense that it had been interpreted in the context of sufficiency of disclosure.

Starting from document D2, the person skilled in the

art would have taken the teachings of document D1 into account since document D1 closed the gap of document D2. Documents D2 and D1 were from the same technical field. No physical modifications were necessary in order to combine the teachings of document D1 with those of document D2. The person skilled in the art only had to adapt the controller, i.e. update software. It was irrelevant that document D2 disclosed a pneumatically actuated valve since claim 10 of the sixth auxiliary request did not specify the printhead drive mechanism. Furthermore, the electrically operated valve was controlled by the software (see document D2, paragraph [0046]). Paragraphs [0005] and [0006] of document D1 mentioned known thermal transfer printers. The thermal transfer printer of document D2 was one such known thermal transfer printer. Documents D2 and D1 were compatible since in both documents the printhead was moved to different positions. The different mechanical construction in documents D2 and D1 would not prevent the person skilled in the art from improving or changing the features related to the control.

The subject-matter of claim 10 of the sixth auxiliary request was also not inventive starting from document D9 in combination with the common general knowledge. Features 12f and 12g were not technically linked. The paper transport path according to feature 12f was generally known in the art and did not solve any technical problem. Feature 12g had the same technical effect as mentioned above in the context of document D2. Hence, the same objective technical problem had to be solved. Since document D9 already disclosed two pressure settings for two different ribbons, the thermal transfer printer was already capable of controlling printing pressure depending on different

ribbons. Only a software update was needed to adapt the thermal transfer printer to apply the pressure settings for one ribbon.

In addition, the subject-matter of claim 10 of the sixth auxiliary request was not inventive starting from document D1 in combination with the common general knowledge. The opposition division had not admitted this objection because it was considered late-filed and prima facie not relevant. However, document D1 was prima facie relevant since it disclosed all the features of claim 10 of the sixth auxiliary request, except feature 12f. Movement of the printhead along a track extending in parallel with the substrate transport path was necessary for intermittent printing, which was a well-known way of printing. In the opposition proceedings, document D1 had been discussed for the subject-matter of claim 1 of the first auxiliary request, so it was unreasonable to hold that document D1 was not relevant for the subject-matter of claim 10 of the sixth auxiliary request. Therefore, the opposition division should have admitted this objection.

(ii) Respondent (patent proprietor)

The subject-matter of claim 10 of the sixth auxiliary request was inventive over a combination of documents D2 and D1. Starting from document D2 and solving the suggested objective technical problem, the person skilled in the art would not have consulted document D1. Firstly, the construction of the printhead was completely different in documents D2 and D1. Document D2 disclosed a pneumatic cylinder as an actuator 35 for the printhead which was movable in parallel with the substrate transport path. In contrast, the printhead in

document D1 was stationary and mechanically actuated via a pivoting mechanism. Secondly, paragraphs [0005] and [0006] of document D2 explicitly taught away from pivot-mounting the printhead. Contrary to the opponent's assertions, the control of document D1 could not be implemented in document D2 merely via a software update since the two documents were technically and functionally incompatible. Since the control of the printhead was inherently linked to the architecture of the printhead, the person skilled in the art would not have incorporated the isolated control features from document D1 in the thermal transfer printer of document D2. Furthermore, document D1 did not disclose feature 12g, i.e. control of the pressure along a plurality of pressure settings. Document D1 merely disclosed a look-up table with stored data, and selected a single pressure.

The subject-matter of claim 10 of the sixth auxiliary request was also not obvious starting from document D9 in combination with the common general knowledge. Document D9 was a worse starting point for the assessment of inventive step than document D2. There were two distinguishing features: the track direction according to feature 12f and the control along a plurality of discrete pressure settings according to feature 12g. There was nothing in document D9 to prompt the person skilled in the art towards the claimed invention. The paper feed was not parallel to the movement track of the printhead, the predetermined pressure was a single pressure setting for a corresponding ribbon and there was no suggestion to change the pressure settings to achieve or ensure an acceptable print quality.

The opposition division was right not to admit the

objection based on document D1 in combination with the common general knowledge since it was late-filed and prima facie not relevant; the board should not admit it either. As regards the late filing of this objection, claim 10 of the sixth auxiliary request corresponded to claim 12 as granted, so this objection could and should have been raised in the notice of opposition. With regard to the lack of prima facie relevance, document D1 disclosed a stationary printhead, and it was not trivial to implement the printhead drive mechanism according to feature 12f. Feature 12g was not disclosed in document D1 either.

## Reasons for the Decision

1. Late filing of the opponent's reply to the patent proprietor's statement of grounds of appeal

As correctly observed by the patent proprietor, the opponent's reply to the patent proprietor's statement of grounds of appeal was filed after the expiry of the period prescribed in Article 12(1)(c) RPBA.

According to established case law, the purpose of Article 12 RPBA is to ensure that parties present their complete case at the outset of the proceedings in order to ensure the board has an appeal file containing comprehensive submissions from each party and to prevent tactical abuses of procedure (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition, 2022, "Case Law", V.A.4.4.5j)).

The board considers that Article 13(1) RPBA applies to the submissions in a reply to the grounds of appeal filed after the expiry of the time limit set forth in Article 12(1)(c) RPBA (see decision T 2638/16). The

board notes that the opponent's reply to the patent proprietor's statement of grounds of appeal was received on 15 September 2022 at 00:06 (CEST), i.e. only 6 minutes after the expiry of the time limit. Furthermore, this late filing did not prevent the board from considering the complete case of all the parties. Nor can the board see any indication that the late filing was a tactical abuse of procedure or contrary to procedural economy. For these reasons, the board exercised its discretion under Article 13(1) RPBA and admitted the submissions in the opponent's reply to the patent proprietor's statement of grounds of appeal into the proceedings.

2. Sixth auxiliary request - added subject-matter

2.1 Amendments to claim 6 of the sixth auxiliary request - Article 123(2) EPC

The parties agree that the term "and, optionally," in claim 6 of the sixth auxiliary request means that several features are claimed in a sequential order. The board concurs with the patent proprietor's reasoning that the combination of all the features of claim 6 of the sixth auxiliary request is directly and unambiguously derivable from claims 9 to 13 as originally filed. Since claim 13 as originally filed depends on claim 10 as originally filed or claim 12 as originally filed, which in turn depends on claim 10 as originally filed via claim 11 as originally filed, both alternatives and their combination are covered by the dependency of the claims as originally filed.

Therefore, the board concurs with the opposition division's conclusion that the requirements of Article 123(2) EPC are met (see decision under appeal,

Reasons, point 20.1).

2.2 Admittance of further objections under Article 123(2) EPC against claim 1 of the sixth auxiliary request

2.2.1 The sixth auxiliary request in the appeal proceedings corresponds to the second auxiliary request considered in the decision under appeal. It had been filed as the tenth auxiliary request on 22 July 2021 during the opposition proceedings, before the final date for making written submissions under Rule 116 EPC. In its statement of grounds of appeal, the opponent for the first time raised the objection that including features based on claims 5 and 6 as originally filed in claim 1 of the sixth auxiliary request did not fulfil the requirements of Article 123(2) EPC. Consequently, this objection does not meet the requirements of Article 12(2) RPBA and is, as per Article 12(4) RPBA, to be regarded as an amendment to the opponent's case.

Furthermore, the opponent did not demonstrate that this objection had been admissibly raised and maintained in the opposition proceedings leading to the decision under appeal. Therefore, under Article 12(4) RPBA, any such amendment may be admitted only at the board's discretion. Contrary to the requirement of Article 12(4), third sentence, RPBA, the opponent did not provide any reasons why it did not submit the amendment until the appeal proceedings. Additionally, under Article 12(6), second sentence, RPBA, the board shall not admit objections which should have been submitted in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance. In the board's view, the opponent could and should have already submitted the

newly raised objections in the first-instance proceedings. The opponent did not set out any circumstances which would justify the admittance of the new objection, nor can the board see any.

In view of the above, the board, in exercising its discretion under Article 12(4) and (6) RPBA, did not admit these further objections under Article 123(2) EPC against claim 1 of the sixth auxiliary request.

2.2.2 The second objection under Article 123(2) EPC with respect to the omission of the feature "*wherein the motor is coupled to the printhead via a flexible linkage*" from claim 1 was raised for the first time by letter dated 18 December 2023, i.e. after the board's communication under Article 15(1) RPBA. Consequently, its admittance is subject to Article 13(2) RPBA.

Under Article 13(2) RPBA, any amendment to a party's appeal case made after notification of a communication under Article 15(1) RPBA, shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

The opponent did not set out any exceptional circumstances justified with cogent reasons, nor are any such circumstances apparent for the board. Therefore, the board did not admit this objection under Article 13(2) RPBA.

2.3 Considering the foregoing, the board concludes that the sixth auxiliary request complies with the requirements of Article 123(2) EPC.

3. Sufficiency of disclosure of the sixth auxiliary request (Article 83 EPC)

The opponent raised objections under Article 83 EPC against claims 1, 6 and 10 of the sixth auxiliary request.

3.1 Sufficiency of disclosure of claim 1 of the sixth auxiliary request

The board's view on the sufficiency of disclosure of the subject-matter of claim 1 of the sixth auxiliary request is that there is enough teaching in the patent to guide the person skilled in the art to monitor whether the printhead has arrived in a predetermined position relative to the surface.

According to feature 1e of claim 1 of the sixth auxiliary request, a motor coupled to the printhead is arranged to vary the position of the printhead relative to the surface and thereby control the pressure exerted by the printhead on the surface. The contested feature 1f of claim 1 of the sixth auxiliary request has to be read in this context. For the implementation, it is necessary and self-evident that a printhead position has to be monitored, which - as established in the patent - is done, for example, on the basis of the number of steps of the motor in the case of a stepper motor. However, other motors are likewise disclosed, such as DC motors (see patent, paragraphs [0102] to [0105]). The patent gives examples of how to monitor whether the printhead has arrived in a predetermined position relative to the substrate (see patent, e.g. paragraphs [0066], [0067], [0070] and [0078] to [0083], Figures 9 and 10). Paragraphs [0066], [0078] and [0082] and Figure 10 of the patent in particular correlate the

position of the printhead with the pressure on the platen/substrate.

3.2 Non-admittance of the objection under Article 83 EPC against claim 6 of the sixth auxiliary request

In its statement of grounds of appeal, the opponent for the first time raised an objection under Article 83 EPC against claim 6 of the sixth auxiliary request, concerning the non-feasibility of monitoring both the power supplied to the motor and the power supplied to the motor drive circuit. Therefore, this objection does not meet the requirements of Article 12(2) RPBA.

Furthermore, the opponent did not demonstrate that this objection had been admissibly raised and maintained in the opposition proceedings leading to the decision under appeal. Claim 6 of the sixth auxiliary request corresponds to claim 8 as granted. Contrary to the opponent's assertion, this objection had not been raised in its notice of opposition – the insufficiency of dependent claims 2 to 11 as granted is asserted only in so far as these claims depend on claim 1 as granted (see notice of opposition, page 9, first paragraph). In accordance with Article 12(4) RPBA, the objection under Article 83 EPC against claim 6 is therefore to be regarded as an amendment to the opponent's case.

Under Article 12(4) RPBA, any such amendment may be admitted only at the board's discretion. Contrary to the requirement under Article 12(4), third sentence, RPBA, the opponent did not provide any reasons why it did not submit the amendment until the appeal proceedings.

Moreover, under Article 12(6), second sentence, RPBA,

the board shall not admit objections which should have been submitted in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance. The board is of the view that the opponent could and should have already submitted the newly raised objections in the first-instance proceedings. The opponent did not set out any circumstances which would justify the admittance of this objection.

For these reasons, the board, in exercising its discretion under Article 12(4) and (6) RPBA, did not admit the objection under Article 83 EPC against claim 6 of the sixth auxiliary request.

3.3 Sufficiency of disclosure of claim 10 of the sixth auxiliary request

Concerning the sufficiency of disclosure of claim 10 of the sixth auxiliary request, which corresponds to claim 12 as granted, the opponent objected to the feature "*a printhead pressure control mechanism for controlling the pressure of the printhead against the ribbon and the substrate along a plurality of discrete pressure settings*".

The board concurs with the patent proprietor's arguments that paragraphs [0064], [0065], [0075], [0076], [0079] and [0081] to [0083] of the patent disclose a relationship "*between the number of steps applied to the motor 46 after the threshold is reached and the resultant force*" (see patent, paragraph [0082]). Several paragraphs of the patent describe the closed-loop control, in which the printhead pressure is adjusted "*in response to feedback signals which represent a method to determine whether the printhead*

*pressure is tending towards being either too light or too heavy and to maintain the printhead pressure at a level which delivers acceptable print quality within pre-determined limits*" (see patent, paragraph [0065]). Paragraph [0079] of the patent discloses that "*[b]ased on calibration techniques a number of steps through which the controller should cause the motor 46 can to turn can be known* [sic] *such that the printhead exerts the desired force on the platen*". According to paragraph [0081], "*[t]he number of steps to be applied can be determined using a feedback mechanism using a loadcell sensing the pressure exerted by the printhead on the platen*" and "*the number of steps to be applied can be known from prior determination that a particular force requires application of a particular number of steps*". From these teachings, the board concludes that the correlation between the number of steps of the motor and the exerted pressure disclosed in paragraph [0082] is applied to determine the pressure (see also Figure 10 of the patent).

The above findings confirm that there are a plurality of discrete pressure settings which are used to control the pressure of the printhead against the ribbon (see claim 10 of the sixth auxiliary request, feature 12g). As argued by the opponent, a single pressure is achieved by feature 12g. However, this does not result in insufficient disclosure in view of the above interpretation of feature 12g.

Notwithstanding the fact that the Guidelines for Examination in the European Patent Office are not binding for the Boards of Appeal, the board does not share the opponent's view that in the patent a stepper motor was an essential feature which was missing from claim 10 of the sixth auxiliary request, thus resulting

in insufficiency of disclosure. The patent provides an example of how to implement the invention using a stepper motor. This is undisputed. As mentioned by the patent proprietor, DC motors are likewise disclosed in the patent (see patent, paragraphs [0102] to [0105]). Consequently, in the board's view a stepper motor is not an essential feature and its omission from claim 10 of the sixth auxiliary request does not result in insufficiency of disclosure. Lastly, it is noted that the question of whether the absence of a stepper motor in claim 10 of the sixth auxiliary request, which corresponds to claim 12 as granted, constitutes a violation of Article 84 EPC cannot be examined in these opposition-appeal proceedings in view of decision G 3/14.

3.4 To sum up, the claims of the sixth auxiliary request comply with the requirements of Article 83 EPC.

4. Novelty of the subject-matter of claim 10 of the sixth auxiliary request (Article 54 EPC)

Novelty objections were raised against the subject-matter of claim 10 of the sixth auxiliary request (corresponding to claim 12 as granted) on the basis of documents D2 and D9.

4.1 Novelty of the subject-matter of claim 10 of the sixth auxiliary request over document D2

4.1.1 The board concurs with the opposition division's conclusion that the subject-matter of claim 10 of the sixth auxiliary request, i.e. the second auxiliary request considered in the decision under appeal, is new over document D2, since document D2 does not anticipate the feature "*a printhead pressure control mechanism for*

*controlling the pressure of the printhead against the ribbon and the substrate along a plurality of discrete pressure settings*" (feature 12g) (see decision under appeal, Reasons, point 23.2.1).

4.1.2 The board agrees with the opponent that paragraphs [0044] to [0046] of document D2 disclose three different positions of the printhead – a printing position 12, a retracted position 12a and a position 12b beyond the retracted position – and that the actuator 35 of document D2 is controlled to move the print head. However, as established by the patent proprietor, "some pressure" is only exerted in position 12 (see document D2, paragraph [0049]). The retracted position 12a and the position 12b beyond the retracted position do not apply a pressure of the printhead against the ribbon and the substrate as required by feature 12g. Furthermore, the board notes that the actuator 35 for positioning the printhead of document D2 is controlled in response to an input from a sensor, which warns the controller of the impending approach of a seam (see document D2, paragraph [0046]). This sensor signal is not indicative of a pressure exerted by the printhead on the substrate, so it does not anticipate feature 12g.

4.1.3 The opponent asserted that the pressure was lower at position 12a than at position 12 and was zero at position 12b. However, there is no disclosure in document D2 supporting the opponent's allegation. The board agrees with the patent proprietor that positions 12a and 12b present a retracted position in which the pressure is not controlled against the ribbon and the substrate, contrary to what is required by feature 12g (see document D2, paragraphs [0044] and [0049]).

4.2 Novelty of the subject-matter of claim 10 of the sixth auxiliary request over document D9

4.2.1 The board comes to the same conclusion as the opposition division that the subject-matter of claim 10 of the sixth auxiliary request, i.e. the second auxiliary request considered in the decision under appeal, is new over document D9 (see decision under appeal, Reasons, point 23.2.2). The features "*a printhead drive mechanism for transporting the printhead along a track (22) extending generally parallel to the predetermined substrate transport path and for displacing the printhead into and out of contact with the ribbon*" (feature 12f) and "*a printhead pressure control mechanism for controlling the pressure of the printhead against the ribbon and the substrate along a plurality of discrete pressure settings*" (feature 12g) are not disclosed in document D9.

4.2.2 With regard to feature 12f, the opponent has not convincingly shown that document D9 discloses that the printhead is transported along a track parallel to the substrate transport path. The passage referred to by the opponent (see document D9, column 3, lines 25 to 52) only discloses that a guide shaft 3 on which the carriage 4 is mounted can be reciprocated in parallel with the platen 2, i.e. the printhead moves along a guide shaft which is parallel to the platen. There is no explicit or implicit disclosure of the printhead being transported along a track extending generally in parallel with the predetermined substrate transport path. Although the thermal transfer printer of document D9 is suitable for transporting paper, it does not directly and unambiguously disclose the substrate transport path, which in Figure 1 of document D9 might

be either parallel or perpendicular to the printhead transport track.

4.2.3 Concerning feature 12g, the parties agree that document D9 discloses different pressures (strong and weak) only in the context of different modes for different ribbons (hot melt or hot sublimation) (see document D9, column 3, lines 58 to 65; column 11, lines 48 to 67). In the board's view, the different pressures are achieved by switching between the two modes (see document D9, column 2, lines 27 to 38). This does not correspond to a plurality of discrete pressure settings of a printhead pressure against the ribbon and the substrate as claimed in claim 10 of the sixth auxiliary request. Hence, document D9 does not anticipate feature 12g.

4.3 As set out above, the subject-matter of claim 10 of the sixth auxiliary request is new (Article 54 EPC).

5. Inventive step of the subject-matter of claim 10 of the sixth auxiliary request (Article 56 EPC)

The opponent raised inventive step objections on the basis of document D2 in combination with document D1, document D9 in combination with the common general knowledge and document D1 in combination with the common general knowledge.

5.1 Inventive step of the subject-matter of claim 10 of the sixth auxiliary request in view of the combination of documents D2 and D1

5.1.1 The parties agree that document D2 is a suitable starting point for the assessment of inventive step, that the subject-matter of claim 10 of the sixth auxiliary request differs from document D2 on account

of feature 12g, that the technical effect of this feature is to ensure an acceptable print quality and that the objective technical problem is how to ensure an acceptable print quality.

5.1.2 Although the board agrees with the opponent that document D1 discloses a printhead pressure control according to feature 12g (see document D1, paragraphs [0031] and [0032]), the board shares the patent proprietor's view that the person skilled in the art starting from document D2 would not have considered document D1. While documents D1 and D2 belong to the same technical field, there are basic differences. In document D2, the printhead moves along a track parallel to the platen and is actuated by a pneumatic valve, whereas in document D1 the printhead is stationary and is mechanically actuated in a pivoting manner. Paragraphs [0005] and [0006] of document D2 explicitly teach away from pivot-mounting the printhead. Furthermore, the control mechanism disclosed in document D1 is intrinsically linked with the printhead being constructed as a stationary, pivoting mechanism. Even if the person skilled in the art had combined the teachings of documents D2 and D1, they would not have arrived at the claimed subject-matter. Such a combination would have required more than just modifying the software of document D2. The person skilled in the art would not have isolated the control features of document D1 which are not compatible with the printhead of document D2.

5.1.3 Therefore, the board concludes that the subject-matter of claim 10 of the sixth auxiliary request is not obvious in view of a combination of documents D2 and D1.

5.2 Inventive step of the subject-matter of claim 10 of the sixth auxiliary request in view of the combination of document D9 and the common general knowledge

5.2.1 Document D9 constitutes a possible starting point for the assessment of inventive step. The subject-matter of claim 10 of the sixth auxiliary request differs from document D9 on account of features 12f and 12g. It is undisputed that the technical effects of these two distinguishing features represent an aggregation of isolated effects which have no interdependence.

5.2.2 According to established case law, this gives rise to two technically independent partial problems. For the subject-matter of the claim to be considered inventive, it suffices to show that the solution to just one of these problems is not obvious (see decision T 345/90, Reasons, point 5, and decision T 701/91, Reasons, points 6.4 and 6.5).

5.2.3 As set out in point 5.1.1 above, the objective technical problem solved by feature 12g is how to ensure an acceptable print quality.

5.2.4 Document D9 discloses two different modes for two different ribbons (see document D9, column 8, lines 12 to 32). The mode signal is provided by the mode changeover switch 71 manipulated by an operator (see document D9, column 8, lines 17 to 19 and lines 46 to 48). The person skilled in the art is not prompted to apply a plurality of discrete pressure settings for one ribbon. Therefore, the opponent's argument that the thermal transfer printer of document D9 was already capable of controlling the printing pressure depending on different ribbons, and that for this reason the person skilled in the art would have adapted the

software to apply the pressure settings for one ribbon, is not convincing.

5.2.5 Since the board considers that it was not obvious for the person skilled in the art to modify the thermal transfer printer known from document D9 to arrive at feature 12g, the question of whether feature 12f is obvious may be left open.

5.2.6 Hence, the subject-matter of claim 10 of the sixth auxiliary request is not obvious starting from document D9.

5.3 Admittance of the inventive step objection against the subject-matter of claim 10 of the sixth auxiliary request starting from document D1 in combination with the common general knowledge

5.3.1 The inventive step objection starting from document D1 in combination with the common general knowledge was not admitted by the opposition division since it was considered late-filed and prima facie not relevant (see decision under appeal, Reasons, point 23.3.1). The opponent submitted this objection again with its statement of grounds of appeal.

5.3.2 In accordance with Article 12(6) RPBA, the board shall not admit objections which were not admitted in the proceedings leading to the decision under appeal, unless the decision not to admit them suffered from an error in the use of discretion or unless the circumstances of the appeal case justify their admittance.

5.3.3 It is established case law (see Case Law, V.A.3.4.1 b)) that, on appeal against a decision taken by a

department of first instance in the exercise of its discretion, it is not the board's task 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 its discretion in the same way. The board should overrule the way in which the department of first instance exercised its discretion in reaching a decision in a particular case only if the board concludes that the department of first instance 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.

5.3.4 The board cannot see that the opposition division, in deciding not to admit the inventive step objection based on document D1 into the proceedings, exercised its discretion under Article 114(2) EPC in accordance with the wrong principles, without taking the right principles into account or in an arbitrary or unreasonable way. According to established case law, a decisive criterion for admitting late-filed documents in opposition proceedings is their prima facie relevance (see Case Law, IV.C.4.5.1), so the opposition division reached its decision by applying the right principles. The board therefore does not see any reason to overrule the opposition division's decision not to admit the inventive step objection based on document D1 into the proceedings.

5.3.5 Furthermore, the board notes that claim 10 of the sixth auxiliary request corresponds to claim 12 as granted. The opponent did not provide any reasons why this objection had not been filed earlier, nor did it highlight any circumstances of the appeal case which

justified admitting this objection.

5.3.6 In view of the above, the board, in exercising its discretion under Article 12(4) RPBA, decided not to admit the inventive step objection starting from document D1 in combination with the common general knowledge in accordance with Article 12(4) and (6) RPBA.

5.4 In view of the above, the board concludes that the subject-matter of claim 10 of the sixth auxiliary request involves an inventive step.

6. Overall conclusion

As the objections against the sixth auxiliary request discussed above are not convincing and as there are no further objections, the patent is maintained as amended on the basis of the sixth auxiliary request. Consequently, the appeal has to be dismissed.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar: The Chairman:

N. Schneider P. Lanz

Decision electronically authenticated