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**Datasheet for the decision  
of 8 June 2016**

**Case Number:** T 1730/12 - 3.2.05

**Application Number:** 07012470.6

**Publication Number:** 1829697

**IPC:** B41J33/36, B41J33/54

**Language of the proceedings:** EN

**Title of invention:**

Tape drive and printing apparatus

**Patent Proprietor:**

Videojet Technologies, Inc.

**Relevant legal provisions:**

EPC 1973 Art. 56, 83

EPC Art. 123(2)

**Keyword:**

Admissibility of amendments (yes)

Sufficiency of disclosure (yes)

Inventive step (yes)

**Decisions cited:**

T 1727/12



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Case Number: T 1730/12 - 3.2.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.05**  
**of 8 June 2016**

**Appellant:** Videojet Technologies, Inc.  
(Patent Proprietor) 1500 N. Mittel Boulevard  
Wood Dale, IL 60191 (US)

**Representative:** Mark Lloyd Kenrick  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
23 July 2012 concerning maintenance of the  
European Patent No. 1829697 in amended form.

**Composition of the Board:**

**Chairman** M. Poock  
**Members:** O. Randl  
D. Rogers

## **Summary of Facts and Submissions**

- I. The appeal of the patent proprietor aims at setting aside the interlocutory decision of the opposition division on the amended form in which the patent No. 1 829 697 could be maintained.

The opposition division had found that the ground for opposition under Article 100(b) EPC 1973 prejudiced the maintenance of the patent in the form of the main request (patent as granted), that the ground for opposition under Article 100(a) EPC 1973 (lack of novelty) prejudiced the maintenance of the patent in the form of the first auxiliary request, and that the ground for opposition under Article 100(c) EPC 1973 prejudiced the maintenance of the patent in the form of the second auxiliary request. The third auxiliary request, however, was found to satisfy the requirements of the EPC.

The opposition division had in particular considered the following documents:

- D1: US 4 909 648;  
D13: DMX 5000 ATB Printer Maintenance Manual, Revision B, 1987, 1993, Datamax Corp.;  
D18: Thesis by Sotirios A. Tsavdaris:  
"Design of a Magnetic Tape Transport System Employing Stepper Motors".

- II. The opponent (Markem-Imaje Ltd.) had also filed an appeal against the decision of the opposition division but has withdrawn the opposition and the appeal before filing a statement of grounds of appeal.

- III. A third-party intervention was filed by Markem-Imaje GmbH during the appeal proceedings and subsequently withdrawn.
- IV. The board has issued a communication pursuant to Rule 100(2) EPC on 10 November 2015. The appellant has filed a response to this communication, including a new main request.
- V. The appellant requested that the impugned decision be set aside and the patent be maintained on the basis of this main request.
- VI. The independent claims of the main request read:

"1. A thermal transfer printer comprising:  
a printhead for transferring ink from an ink-carrying tape to a substrate on which printing is to be effected, the printhead having an edge supporting an array of heating elements each of which is selectively energisable to melt ink to be transferred to the substrate;  
and a tape drive comprising two motors (14, 15) at least one of which is a stepper motor, two tape spool supports (8, 12) on which spools of tape may be mounted, each spool being drivable by a respective motor, and a controller (17) for controlling the energisation of the motors such that the tape may be transported in at least one direction between spools mounted on the spool supports, characterised in that the controller is operative to energise both motors to drive the spools of tape in the direction of tape transport, and to use the diameters of the spools to coordinate drive of the motors."

"33. A method for controlling a thermal transfer printer comprising a printhead for transferring ink from an ink-carrying tape to a substrate on which printing is to be effected, the printhead having an edge supporting an array of heating elements each of which is selectively energisable to melt ink to be transferred to the substrate and a tape drive, the tape drive comprising two motors (14, 15) at least one of which is a stepper motor, two tape spool supports (8, 12) on which spools of tape may be mounted, each spool support being drivable by a respective motor, and a controller (17) for controlling the energisation of the motors such that tape may be transported in at least one direction between spools mounted on the spool supports, characterised in that the controller energises both motors to drive the spools of tape in the direction of tape transport, and diameters of the spools are used to coordinate drive of the motors."

VII. The appellant argued as follows:

(a) Amendments

Claim 1 has been amended so as to be limited to a thermal transfer printer. This amendment was considered by the opposition division in the context of the third auxiliary request and considered to satisfy the requirements of Article 123(2) EPC. It is clear that the tape drive of claim 1 as granted is intended to be used in a thermal transfer printer and there is no extension of subject matter (see page 1 and page 23 of the PCT specification).

Claims 2 to 32 correspond to claims 2 to 32 of the patent as granted, with amendments to replace "tape

drive" in the preamble of each claim with "thermal transfer printer" for consistency with the amendments made to claim 1.

Claims 32 (sic) to 41 of the patent as granted have been deleted given the amendments made to claim 1.

Claim 33 is based upon claim 42 of the patent as granted.

The requirements of Article 123(2) EPC are therefore satisfied.

(b) Article 83 EPC

Based upon the board's preliminary view, no further comment on the requirements of Article 83 seems necessary.

(c) Article 56 EPC

The requirements of Article 56 EPC are satisfied for the reasons given by the opposition division in relation to the third auxiliary request which it allowed.

Claim 1 of the main request differs from claim 1 of the third auxiliary request considered by the opposition division only in that it omits the feature of two stepper motors, and instead requires two motors, at least one of which is a stepper motor.

In its analysis of document D18, the opposition division noted that document D18 discloses two stepper motors. It follows that its conclusions that the independent claims involved an inventive step were in

no way based upon the presence of two stepper motors (as opposed to two motors at least one of which is a stepper motor). As such, the opposition division's conclusion that claim 1 involves an inventive step on the basis that document D18 is not suitable for use in a thermal transfer printer continue to hold and claim 1 (and claim 33) satisfy the requirements of Article 56 EPC starting from document D18 on this basis.

Similarly, in its analysis of document D1 the opposition division noted that document D1 discloses two stepper motors. It therefore again follows that the opposition division's conclusions that the independent claims involved an inventive step were in no way based upon the presence of two stepper motors (as opposed to two motors at least one of which is a stepper motor). As such, the opposition division's conclusion that claim 1 involves an inventive step on the basis that it would not be obvious to use the diameters of the spools to coordinate drive of the motors continues to hold and claim 1 (and claim 33) satisfy the requirements of Article 56 EPC starting from document D1 on this basis.

(d) Amendments to the description

The opposition division maintained the Patent based upon amended pages 2 to 4 of the description. The amendments made on pages 2 and 3 remain consistent with the main request. The amendment made on page 4 (at paragraph 20) is, however, no longer necessary and the description should, therefore, comprise:

- Pages 2 and 3 filed at the oral proceedings before the opposition division;
- Pages 4 to 18 of the patent as granted.

## Reasons for the Decision

1. The application under consideration was filed on 27 June 2007 as a divisional application to an application filed on 5 September 2001. According to Article 7 of the Act revising the EPC of 29 November 2000 (Special edition No. 4, OJ EPO 2007, 217) and the Decision of the Administrative Council of 28 June 2001 on the transitional provisions under Article 7 of the Act revising the EPC of 29 November 2000 (Special edition No. 4, OJ EPO 2007, 219), Articles 56 and 83 EPC 1973 and Article 123(2) EPC apply in the present case.

2. Amendments (Article 123(2) EPC)

Claim 1 differs from claim 1 of the third auxiliary request before the opposition division, which the division had found to comply with the requirements of the EPC, in that

- "two stepper motors (14, 15)" has been replaced by "two motors (14, 15) at least one of which is a stepper motor" and
- the feature "along a predetermined path past said printhead" has been deleted.

Apart from the replacement of "energization" by "energisation", the definition of the tape drive according to claim 1 corresponds to claim 1 as granted.

In its decision (sheet 16 of the grounds for the decision) the opposition division has explained that it was "clear from the figures en (sic) p. 23 last § that



the tape drive disclosed is part of a thermal transfer printer with heating elements as claimed in claims 1 and 3". Although this statement is somewhat cryptic and excessively condensed, the board reaches the same conclusion, for the following reasons.

The very first lines of the original application make clear that the tape drive according to the invention is to be used in transfer printers. Thermal transfer label printers are cited as industrial applications (page 1, lines 8-9).

The use of a printhead for transferring ink from an ink-carrying tape to a substrate on which printing is to be effected is disclosed on page 1, lines 5-7 ("... a printhead can contact the other side of the ribbon to cause the ink to be transferred from the ribbon on to a target substrate ...").

That the printhead has an edge supporting an array of heating elements each of which is selectively energisable to melt ink to be transferred to the substrate is disclosed in the last paragraph of page 23, which describes the embodiment of Figures 2 and 4 in the following terms: "The edge 32 of the print head 4 (which is of conventional form) supports an array of heating elements each of which is selectively energisable. When the ribbon 6 is sandwiched between the head 4 and a substrate 13, ink adjacent any energised heating element is melted and transferred to the substrate. ...".

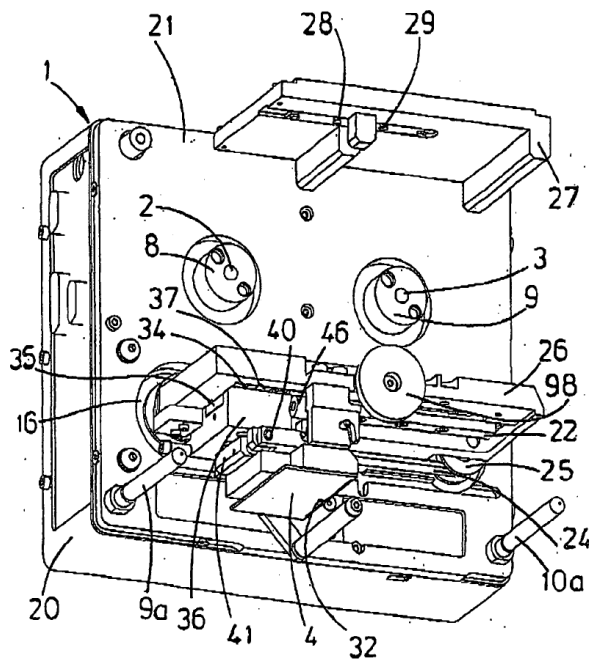


FIG. 2

Therefore, the board is satisfied that claim 1 complies with the requirements of Article 123(2) EPC.

3. Sufficiency of disclosure (Article 83 EPC 1973)

When dealing with claim 1 of the patent, the opposition division first examined the "classical insufficiency" of the invention and found that the patent enabled the skilled person to carry out the invention in one particular manner.

The division then considered the "Biogen sufficiency" of the subject-matter of claims 1 and 4:

"... the patent explains and enables the coordinate drive as defined in claim 1 only for a tape drive using push pull arrangements of motors and using one stepper motor for each spool. There is no technically enabling

disclosure to use other arrangements than push-pull and/or other motors than stepper motors. As explained by the patentee, the opposition division is of the opinion that the push-pull arrangement is implicitly disclosed in claim 1 thanks to the following passage "... such that the tape may be transported in at least one direction between spools mounted on the spool supports" . However, since claim 1 does not include two stepper motors but only "at least one", **the subject matter of claim 1 of the main request does not meet the requirements of articles 100(b) and 83 EPC.**

Moreover, since the disclosure **only** shows how to monitor the tension in the tape by monitoring the power supplied to the motors by monitoring the magnitude of current using a regulated power supply , since the original disclosure does not give any hint to use another method to monitor the tension in the tape and since claim 4 is claiming a controller operative to monitor tension in the tape without monitoring the power supplied to the motors (claim 5) by monitoring the magnitude of current (claim 6) using a regulated power supply (claim 7), **the subject matter of claim 4 of the main request does not meet the requirements of articles 100(b) and 83 EPC.**" (Grounds for the decision, sheet 11, last paragraph until sheet 12, second paragraph; emphasis by the opposition division).

As already explained in parallel decision T 1727/12, point 1.5 of the reasons, the board does not endorse this approach. It is true indeed that the subject-matter of claims 1 and 4 is more general than the embodiment disclosed in the description, but this fact alone does not mean that the claimed subject-matter is insufficiently disclosed. It may be true that the skilled person would not see any other way of

implementing claim 1 than by using two stepper motors, but this is not sufficient to hinder him from carrying out the invention. The argument would be correct if there clearly were other options than what is disclosed in the dependent claims or in the patent specification and if the skilled person would not know how to carry them out. This has, however, not been established by the opposition division. The division has presumed the existence of alternatives and the impossibility for the skilled person to carry them out. The objection, therefore, appears to be purely speculative and, as a consequence, unfounded.

The same holds true for the argument according to which there is no hint in the available prior art how to monitor the tape tension other than by monitoring the current of the power supply of the motor. The fact that the skilled person is aware of only one way of monitoring the tension (which it knows how to carry out) cannot possibly justify an objection under Article 100(b) EPC 1973.

Thus the board has reached the conclusion that the opposition division has not established that the invention is insufficiently disclosed.

4. Inventive step (Article 56 EPC 1973)

The opposition division has found claim 1 of the third auxiliary request before it to involve an inventive step.

This statement was based on an analysis of claim 1 with respect to two documents of the state of the art, i.e. documents D18 and D1.

#### 4.1 Document D18

The opposition division found claim 1 to differ from the disclosure of document D18 "in that the tape drive is for driving an ink carrying tape and is incorporated in a thermal transfer printer comprises also a printhead for transferring ink from an ink-carrying tape to a substrate on which printing is to be effected, the printhead having an edge supporting an array of heating elements each of which is selectively energisable to melt ink to be transferred to the substrate" (sheet 18, third paragraph of the reasons for the decision).

Based on these differences the opposition division found that the teaching of document D18 would not be used in a thermal transfer printer.

#### 4.2 Document D1

The division found claim 1 to differ from the disclosure of document D1 in that "the tape drive also use the diameters of the spools to coordinate drive of the motors and the printer is a thermal transfer printer instead of a dot matrix printer" (sheet 19, second paragraph of the reasons for the decision).

Based on these differences the opposition division found that the claimed solution to the objective technical problem was not obvious for the skilled person.

#### 4.3 Application to the new main request

Claim 1 differs from claim 1 of the third auxiliary request before the opposition division, which the

division had found to comply with the requirements of the EPC, in that

- "two stepper motors (14, 15)" has been replaced by "two motors (14, 15) at least one of which is a stepper motor" and
- the feature "along a predetermined path past said printhead" has been deleted.

Neither the fact that both motors are stepper motors nor the fact that the tape is transported along a predetermined path past the printhead have played a role in the argumentation of the opposition division with respect to inventive step over documents D18 and D1. Therefore, there is no doubt that the opposition division would have reached the same conclusion for claim 1 of the new main request.

The board is not aware of any flaw in the reasoning of the opposition division. Consequently, it endorses the conclusion of the opposition division in respect of inventive step.

Claim 1 of the main request is, therefore, considered to involve an inventive step within the meaning of Article 56 EPC 1973.

Claim 33 is considered to involve an inventive step for analogous reasons.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
  
2. The case is remitted to the opposition division with the order to maintain the patent as amended in the following version:
  - Description: pages 2 and 3 of the description annexed to the decision of the opposition division; pages 4 to 18 of the European patent specification;
  
  - Claims 1 to 33 filed as main request with the letter of 29 February 2016;
  
  - Drawings: Figures 1 to 22 of the European patent specification.

The Registrar:

The Chairman:



D. Meyfarth

M. Poock

Decision electronically authenticated