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**Datasheet for the decision
of 6 July 2021**

Case Number: T 0274/19 - 3.3.06

Application Number: 05745218.7

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B41F33/00, B41L35/14, B41M5/00,
B41J11/00, B41J3/407

Language of the proceedings: EN

Title of invention:
A PROCESS AND SYSTEM FOR PRINTING IMAGES ON ABSORPTIVE
SURFACES

Applicant:
Kornit Digital Ltd.

Headword:
Process for printing images on absorptive surfaces / Kornit
Digital Ltd.

Relevant legal provisions:
EPC Art. 123(2), 56

Keyword:
Amendments - allowable (yes)
Inventive step - (yes)

Decisions cited:

Catchword:



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Case Number: T 0274/19 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 6 July 2021

Appellant: Kornit Digital Ltd.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 5 November 2018
refusing European patent application No.
05745218.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Santavicca
Members: P. Ammendola
C. Heath

Summary of Facts and Submissions

- I. This appeal was filed by the applicant (hereinafter, the **appellant**) against the decision of the examining division to refuse European patent application 05745218.7, because the finally submitted, sole claim request had been found to not be clearly allowable (in view of Articles 83, 84 and 123(2) EPC) and, thus, had not been admitted.
- II. The board summoned the appellant to oral proceedings.
- III. In response to the board's communication in preparation for oral proceedings, with letter of 29 April 2021, the appellant filed a set of amended claims labelled as fifth auxiliary request.
- IV. This fifth auxiliary request comprises three claims.

Claim 1 reads as follows (the differences vis-à-vis claim 1 as originally filed are made apparent):

"1. A process of digital inkjet printing an image directly on a 100% cotton fabric surface, the process comprising:

contacting at least a part of the surface with a wetting composition so as to provide a wet part of the surface ~~,said wetting composition being capable of interfering with the engagement of a liquid ink composition with at least one binding site of the surface; and~~

applying ~~said~~ a liquid ink composition, by an inkjet printing head, on said wet part of the surface, so as to form an ~~the~~ image on said part of the surface; and
curing the image subsequent to said applying;

wherein said contacting is effected in-line of said applying by means of a spray nozzle liquid applicator; characterised in that the ink composition comprises 80% by weight ethylene glycol butyl ether acetate, 4% by weight cyclohexanone, 10% by weight dipropylene glycol methyl ether, and 6% by weight Microlith Black preparation; and

in that:

(a) the wetting composition is 100% butanol and is applied at a density of 0.4 g/cm², and the curing takes place at a temperature between 150°C and 180°C for 180 seconds by means of an infrared curing unit; or

(b) the wetting composition comprises 97% isopropanol and 3% SCX 8383 acrylic emulsion and is applied at a density of 0.4 g/cm², and the curing takes place at a temperature between 150°C and 170°C for 60 seconds by means of an infrared curing unit."

Claims 2 and 3 define preferred embodiments of the process of claim 1.

- V. With a communication dated 18 May 2021 the board informed the appellant that the fifth auxiliary request had been admitted into the appeal proceeding and that its subject-matter appeared to comply with the EPC.
- VI. With letter of 24 May 2021 the appellant requested that the fifth auxiliary request of 29 April 2021 be considered as its new main request. It also withdrew all the other claim requests on file and the previously filed request for oral proceedings.
- VII. The set oral proceedings were therefore cancelled.

VIII. The board understands from the content of the file that the appellant's final requests are that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 3 of the main request, i.e. the set of amended claims labelled fifth auxiliary request filed with letter of 29 April 2021.

IX. Hereinafter, this set of claims will be referred as **main request**.

Reasons for the Decision

Main request

1. Admittance of the main request

The board notes that this request has been filed with letter of 29 April 2021 manifestly to address a number of new issues raised by the board in the communication pursuant to Article 15(1) RPBA 2020 dated 24 March 2021. Hence, the board exercising the discretion under Article 13(1), sentence 4, RPBA 2020, has decided to admit the appellant's main request into the appeal proceedings.

2. Compliance with Article 123(2) EPC

2.1 The claims of the main request no longer contain the wordings that gave rise to the objections of added subject-matter (for which the then submitted sole claim request had been found to not be clearly allowable) by the examining division.

2.2 The board finds that the features of claim 1 not already present in original claim 1 are a concretisation (in particular of ink and wetting

compositions), as originally disclosed in examples 4 and 5 of the application as filed, of the process of the invention

- covered by original claims 1, 2 (curing), 4 (spraying), 7 (liquid applicator), 9 (density of application of wetting composition), 13 (non-aqueous solvent based ink composition), 22 (wetting composition comprising as at least one organic solvent butanol or 2-propanol), 28 and 31 (wetting composition also comprising further agents such as adhesion promoting agents, e.g. acrylic resins) and 42 (cotton textile fabric), and

- disclosed on page 22, lines 9 to 20; page 23, lines 20 to 21; paragraph bridging pages 24 and 25; page 27, lines 22-25; page 30, lines 24-28; page 32, last two paragraphs; page 33, first and second paragraphs; page 42, lines 9 to 17; page 43, lines 11 to 12 and page 53, lines 12 to 14, as well as from the description of prior art from page 4, line 12, to page 5, line 9, and of another (no longer claimed) embodiment of the invention disclosed from page 43, line 8 to page 44, line 8.

2.3 Claim 2 of the main request is identical to original claim 33.

2.4 Claim 3 of the main request corresponds to original claim 40, only amended (in that "said" replaces the "a" in the original wording "*a textile fabric*") to take into account that claim 1 of the main request now requires the surface to be printed to be made of a "*cotton fabric*".

2.5 Hence, the board concludes that the main request complies with the requirements of Article 123(2) EPC.

3. Clarity (Article 84 EPC) and sufficiency of disclosure (Article 83 EPC)

3.1 The claims of the main request no longer contain the wordings that gave rise to the objections of insufficient disclosure and lack of clarity (for which the then submitted sole claim request had been found to not be clearly allowable and, thus, not admitted) raised by the examining division.

3.2 The board is satisfied that the subject-matter of the claims under consideration is sufficiently disclosed and that these claims are clear and supported by the description. The board stresses that in claim 3 the "*said textile fabric*" can only refer to the "*cotton fabric*" described in claim 1 as forming the "*surface*" to be printed in the claimed process.

3.3 Hence, the board concludes that the main request also complies with the requirements of Articles 83 and 84 EPC.

4. Novelty (Article 54 EPC)

The board is satisfied that the subject-matter of the claims of the main request is new vis-à-vis the available prior art, if only for the reason that none of the prior art documents on file - namely: **D1** (DE 31 21 043 A1), **D2** (US 2002/060728 A1), **D3** (US 2004/0100542 A1), **D4** (US 2003/0064206 A1) and **D5** (EP 1 247 890 A1) - mentions combinations of matter possibly in accordance with the definitions of the two alternative "*wetting compositions*" described in items "(a)" and "(b)" of claim 1.

Hence, the board concludes that the (subject-matter of the) main request complies with the requirements of Article 54 EPC as well.

5. Inventive step (Article 56 EPC)

5.1 Claim 1

It is apparent from the wording of this claim that its subject-matter is essentially a wet-on-wet inkjet printing process for cotton fabric, in which a wetting composition is applied immediately before the application of the ink.

5.1.1 The closest prior art

5.1.2 In the board's view, even disregarding the fact that the available prior art does not disclose any composition of matter remotely similar to any of the two alternative specific wetting compositions now recited in claim 1, each of the cited documents disclose printing processes very different from the presently claimed one. In particular,

- D1 does not relate at all to the field of inkjet printing,
- in D2, D3 and D5 there is no application of the ink on a wet portion of the substrate, and
- D4 does not relate to the field of inkjet printing fabrics.

However, the process for inkjet printing of paper disclosed in D4 (see claim 1, Figures 1 and 2 and the corresponding description in paragraphs [0209] to [0227]) might be considered the closest prior art since it at least involves the application of a pretreatment

liquid immediately followed by the application of the ink (i.e. is a wet-on-wet inkjet printing process).

5.1.3 Problem and solution

It is immediately apparent to the board that the process of claim 1 under consideration differs substantially from the prior art of departure: not only due the difference in substrate (cotton fabric vs. paper), but also because of the differences in chemical composition of the ink and of the liquid applied before the ink (compare these features of claim 1 with the several formulations of the ink and of the pretreatment liquid e.g. in the examples of D4, all being aqueous).

Moreover, for the board, even if the sole technical problem solved were just the provision of a (further) inkjet printing process applicable to cotton fabric, still the available prior art cannot possibly render obvious the modifications to the closest prior art of departure required to arrive at the subject-matter of claim 1 under consideration, for the following reasons.

5.1.4 Non-obviousness

It is immediately apparent to the board that the other available citations disclose neither the specific ink composition now recited in claim 1 (which comprises 80% by weight ethylene glycol butyl ether acetate, 4% by weight cyclohexanone, 10% by weight dipropylene glycol methyl ether, and 6% by weight Microlith Black preparation), nor any of the two alternatives described in the same claim for the wetting composition (i.e. either 100% butanol applied at a density of 0.4 g/cm²; or a composition comprising 97% isopropanol and 3% SCX

8383 acrylic emulsion applied at a density of 0.4 g/cm²).

Hence, the subject-matter of claim 1 of the main request is manifestly not obvious in view of the available prior art (Article 56 EPC).

- 5.2 Of course the same reasoning applies *a fortiori* to the preferred embodiments of the process of claim 1 defined in the two remaining claims of the main request.
- 5.3 Therefore, the board concludes that the main request complies with the requirements of the EPC.
6. The oral proceedings have been cancelled in consequence of the appellant's withdrawal, with letter of 24 May 2021, of the previously filed request for oral proceedings and of the appellant's request, with the same letter, that the fifth auxiliary request of 29 April 2021 be considered as its new main request. Hence, the appeal fee shall be reimbursed at 25% in application of Rule 103(4)(c) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent on the basis of claims 1 to 3 of the main request (set labelled as fifth auxiliary request filed with letter of 29 April 2021) and a description to be adapted thereto.
3. The appeal fee shall be reimbursed at 25%.

The Registrar:

The Chairman:



A. Pinna

G. Santavicca

Decision electronically authenticated