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Datasheet for the decision of 26 June 2014

Case Number: T 0415/10 - 3.4.02

Application Number: 01986466.9

Publication Number: 1344104

IPC: G02F1/1343, G02F1/1339

Language of the proceedings: EN

Title of invention:
ELECTRODE STRUCTURE WHICH SUPPORTS SELF ALIGNMENT OF LIQUID DEPOSITION OF MATERIALS

Applicant:
Transpacific Infinity, LLC

Headword:

Relevant legal provisions:
EPC Art. 54

Keyword:
Novelty - (no)
Oral proceedings - withdrawal of request for oral proceedings

Decisions cited:

Catchword:

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Case Number: T 0415/10 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 26 June 2014

Appellant: (Applicant)	Transpacific Infinity, LLC 2711 Centerville Road Suite 400 Wilmington DE 19808 (US)
Representative:	Small, Gary James Carpmaels & Ransford LLP One Southampton Row London WC1B 5HA (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 23 September 2009 refusing European patent application No. 01986466.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	A. Klein
Members:	A. Hornung
	L. Bühler

Summary of Facts and Submissions

I. The applicant (appellant) has appealed against the decision of the examining division refusing the European patent application 01986466.9 on the basis of Article 54 EPC.

II. The appellant requested to set aside the decision of the examining division and to grant a patent on the basis of an amended set of claims filed with his letter dated 3 February 2010. This claim request constituted the main and sole claim request of the appellant.

As a further auxiliary measure, the appellant requested oral proceedings.

III. In a communication annexed to the summons to oral proceedings, the board informed the appellant inter alia about its provisional and non binding opinion on novelty of the claimed subject-matter. Reference was made to document D1 [EP0862156].

The board's opinion was worded as follows:

"7. Novelty

D1 discloses, with reference to figure 11, an electrode structure configured to promote deposition of a fluid (114A) in a precise island pattern (column 29, lines 4-7), the electrode structure comprising

- a first electrode layer (141),

- an island of fluid (114A) formed on, and in electrical contact with, the first electrode layer (141),

- a second electrode layer (155, 240) formed in contact with the first electrode layer (141) and substantially surrounding and having a contact to the island of fluid (114A)
[concerning the feature "surrounding": the first electrode layer (141) comprises a rectangular pixel electrode formed by patterning the ITO film: see figure 2, column 20, lines 36-43 and column 22, lines 3-4; moreover, it is disclosed in column 28, lines 50-56, that the hydrophilicity of the pixel electrode is high relative to the hydrophilicity of its periphery, which means that the rectangular pixel electrode is surrounded on all sides by the second layer],

- wherein the second electrode layer includes a plurality of sub-layers (155, 240) including:

- a first sub-layer (155) that is formed by using metal in electrical connection with the island of fluid *[see figure 11; see also column 29, lines 14-19, stating that metal is an alternative to the amorphous silicon used in the embodiment of figure 11]*,

- a second sub-layer (240), called "interlevel insulation film", different from the first sub-layer.

D1 does not disclose any precise value of the surface energy of the second sub-layer.

However, the expression used in claim 1, "*low* surface energy", has only a relative meaning without clearly limiting the scope of the claim (Article 84 EPC).

Moreover, the interlevel insulation film of D1 is suitable for confinement of the island of fluid since

- (i) its purpose is to generate a difference in height at the boundary between each pixel and its periphery to facilitate the coating of the liquid (see e.g. column

13, lines 17-49; even though the difference in height in the sixth embodiment of figure 11 is less than that of the fifth and seventh embodiments, it may still be considered as contributing to the improved confinement of the island of fluid) and since

- (ii) the interlevel insulation film may be made, for instance, of polyimide having high liquid repellency, i.e. low surface energy (see e.g. column 29, lines 18-19; column 30, lines 17-24).

Therefore, it would appear that the interlevel insulation film of D1 is covered by the wording of claim 1 defining the second sub-layer.

It follows that the claimed subject-matter appears to be anticipated by the embodiment shown in figure 11 of D1 (Article 54(1) and (2) EPC)."

IV. In response to the summons to oral proceedings, the appellant informed the board with its letter dated 2 June 2014 that the request for oral proceedings is withdrawn. The appellant filed no comments concerning the board's preliminary opinion as annexed to the summons, but requested that a decision be made based on the written submissions.

V. Following the appellant's letter of 2 June 2014, the oral proceedings were cancelled.

VI. Independent claim 1 of the appellant's main and sole request reads as follows:

"1. An electrode structure configured to promote deposition of a fluid in a precise island pattern, the electrode structure comprising:
- a first electrode layer formed on a surface;

- at least one island of the fluid in the precise pattern formed on the first electrode layer and in electrical contact with the first electrode layer; and
- a second electrode layer formed in contact with the first electrode layer and substantially surrounding the at least one island of the precise island pattern and having a contact to the fluid in the precise island pattern;
- wherein the second electrode layer includes a plurality of sub-layers including:
- a first sub-layer that comprises a conductor in electrical connection with the island of the fluid; and
- a second sub-layer different from the first sub-layer that comprises a material having a low surface energy suitable for confinement of the island of the fluid."

Reasons for the Decision

1. In the annex to the summons, the board expressed its view that the subject-matter of claim 1 appeared to be anticipated by the disclosure of D1 (Article 54(1) and (2) EPC). The board cannot identify any distinction over the electrode structure disclosed in D1, based, in particular, on the confinement method or on the second layer arrangement used in the claimed invention, as was submitted by the appellant in its grounds of appeal.

2. The appellant neither attempted to rebut the board's provisional opinion, nor submitted any new requests aiming at overcoming the objections. The board sees no reason to deviate from its preliminary opinion.

3. It follows that the present patent application does not meet the requirements of Article 54(1) and (2) EPC for the reasons set out in the board's preliminary opinion (see point III above).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Kiehl A. Klein

Decision electronically authenticated