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**Datasheet for the decision  
of 22 March 2011**

**Case Number:** T 1809/07 - 3.5.05

**Application Number:** 03726959.4

**Publication Number:** 1514169

**IPC:** G06F 3/00

**Language of the proceedings:** EN

**Title of invention:**  
Linearized conductive surface

**Applicant:**  
3M Innovative Properties Company

**Headword:**  
Linearized conductive surface/3M

**Relevant legal provisions:**  
RPBA Art. 15(3) and (6)

**Relevant legal provisions (EPC 1973):**  
EPC Art. 56, 84, 106, 107, 108

**Keyword:**  
"Lack of clarity and of inventive step"

**Decisions cited:**  
J 0010/07, T 0748/91

**Catchword:**  
-



Case Number: T 1809/07 - 3.5.05

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.05  
of 22 March 2011

**Appellant:** 3M Innovative Properties Company  
3M Center  
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**Representative:** Vossius & Partner  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 11 May 2007  
refusing European patent application  
No. 03726959.4 pursuant to Article 97(1) EPC  
1973.

**Composition of the Board:**

**Chairman:** A. Ritzka  
**Members:** M. Höhn  
G. Weiss

## Summary of Facts and Submissions

I. This appeal is against the decision of the examining division, dispatched on 11 May 2007, refusing European patent application No. 03726959.4 because of lack of inventive step (Article 56 EPC 1973) in the light of the disclosure of

D1: US 4371746 A1.

II. The notice of appeal was received on 18 July 2007. The appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 21 September 2007. The appellant requested that the appealed decision be set aside and that a patent be granted on the basis of the set of claims 1 to 21 filed with letter dated 17 February 2006 and on which the appealed decision is based. Oral proceedings were requested on an auxiliary basis.

III. A summons to oral proceedings to be held on 24 March 2011 was issued on 6 December 2010. In an annex accompanying the summons the board expressed its preliminary opinion that the subject-matter of independent claim 1 lacked clarity (Article 84 EPC 1973) and did not involve an inventive step (Article 56 EPC 1973) having regard to the disclosure of D1 or

D2: US 4198539 A1 or

D3: US 4293734 A1.

IV. By letter dated 9 December 2010 the appellant requested that the oral proceedings be cancelled and another date be fixed. The board accepted the representative's

reasons and rearranged the date for oral proceedings to take place on 22 March 2011.

- V. By letter dated 2 March 2011 the appellant's representative informed the board that it would not be attending the oral proceedings.
- VI. Independent claim 1 according to the sole request reads as follows:

"1. An article comprising:  
a transparent conductive surface;  
two or more polygonal parallel rows of conductive segments disposed on the conductive surface, each edge of each row comprising two end conductive segments and one or more middle conductive segments disposed between the two end conductive segments;  
wherein for each edge of each row, the middle segments are equal in length, and the segments are separated by gaps of equal length;  
wherein for each edge, the length of the middle segments in an inner row along the edge is smaller than the length of the middle segments in an outer row along the same edge; and  
wherein at least one segment in a row is connected via one or more conductive bars to a segment in an adjacent row."

- VII. The appellant requested in writing that the appealed decision be set aside and that a patent be granted on the basis of the set of claims 1 to 21 filed with letter dated 17 February 2006.

VIII. Oral proceedings were held on 22 March 2011 in the absence of the appellant. After due deliberation on the basis of the written submissions in the statement setting out the grounds of appeal and of the request, the board announced its decision.

### **Reasons for the Decision**

1. Admissibility

The appeal complies with the provisions of Articles 106 to 108 EPC 1973, which are applicable according to J 10/07, point 1 (see Facts and Submissions, point II above). Therefore the appeal is admissible.

2. Non-attendance at oral proceedings

In its letter of 2 March 2011 the appellant announced that it would not be attending the oral proceedings. The board considered it expedient to maintain the date set for oral proceedings. Nobody attended the hearing on behalf of the appellant.

Article 15(3) RPBA stipulates that the board shall not be obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case.

In the present case, the board was in a position to announce a decision at the conclusion of the oral proceedings as foreseen by Article 15(6) RPBA.

3. Article 84 EPC 1973 - clarity

3.1 In the second feature of claim 1 the alternatives "one or more middle conductive segments..." are specified. However, the first alternative option with only one middle segment does not make sense from a technical point of view, because if there is only a single middle segment this has a certain length which cannot be regarded as "equal" in length to other non-existing segments in an edge of a row. Claim 1 therefore lacks clarity in the sense of Article 84 EPC 1973.

3.2 Dependent claims 9 and 14 are defined by negative features by specifying that certain sections of connected conductive corner segments "are removed" rather than defining the corresponding subject-matter by using positive features. A claim's subject-matter is normally defined in terms of positive features indicating that certain technical elements are present. Negative limitations may be used only if adding positive features to the claim would not define more clearly and concisely the subject-matter still protectable. In present claims 9 and 14, however, it is possible to clearly and concisely define the limitations by positive features. Claims 9 and 14 therefore lack clarity.

4. Article 56 EPC 1973 - Inventive step

4.1 Notwithstanding the aforementioned objection concerning the lack of clarity of claim 1, the board judges that all of the features of claim 1 are known from document D2 except for the last feature of the claim, i.e. that

at least one segment in a row is connected via one or more conductive bars to a segment in an adjacent row.

- 4.2 D2 explicitly discloses in accordance with the features of claim 1 a transparent conductive surface (see e.g. column 6, lines 13 to 18 and 31 to 35) with a rectangular structure with four bent "rows", i.e. polygonal parallel rows, of conductive segments CS (see figure 6) with two end conductive segments and a plurality of middle conductive segments in between for each edge. In figure 6 the shown conductive segments CS are of equal length in each of the rows. In accordance with decision T 0748/91 relative dimensions in drawings and size ratios can be inferred from a schematic drawing such as figure 6 of D2. The same is true for the length of the gaps between those middle segments for each edge as can be also seen from figure 6. In addition, figure 6 shows that the length of the conductive segments CS in an inner row along the edge is smaller than the length of the middle segments in an outer row along the same edge (see also claim 20 of D2).
- 4.3 Figure 6 of D2 can be interpreted in the light of the corresponding description in column 6, lines 60 to 64 in a way that there are "connecting parts" between the rows. However, D2 does not explicitly disclose that these "connecting parts" have the form of conductive bars for connecting at least one segment in a row to a segment in an adjacent row as required in the last feature of claim 1.

The objective technical problem underlying this difference is considered to be that the connection

between the rows is integrated in the pattern of electrodes.

- 4.4 Figure 7 of D2 shows an alternative embodiment of a pattern of electrodes in which there are conductive bars between conductive segments CS' of adjacent rows. When starting with the embodiment shown in figure 6 and assessing the requirement of inventive step in the light of the further embodiment of figure 7 of D2, the technical difference leading from the design disclosed in figure 6 of D2 to that in figure 7 of D2 is that "the function of the connecting parts in FIG. 6 is incorporated into the pattern of conductive segments CS', reducing the outside dimensions of the device and the amount of resistive material required" (see D2, column 6, lines 60 to 64). From reading prior art document D2 the skilled person was thus motivated to consider such conductive bars according to the last feature of claim 1 in order to solve the objective problem posed.

The board judges that in the light of such an explicit motivation in D2 it was merely an obvious design option lying within the routine competence of the skilled person to design the connecting parts foreseen in the embodiment of figure 6 in the form of conductive bars in order to integrate them in the pattern of electrodes by connecting a segment of a row to a segment in an adjacent row, in particular in the light of the following statement found in the present application which relates to different design choices for the conductive bars: "In general, connecting conductive bars can have different shapes and assume different orientations with respect to the conductive segments



they connect." (see last sentence of second paragraph at page 10 of the published application).

- 4.5 The board therefore judges that the skilled person starting from the design in figure 6 of D2 would also consider the use of direct connections between adjacent rows without departing from the design of segments of equal length as an obvious alternative solution to the connecting parts as referred to in D2, column 6, line 61 with regard to figure 6. There is no inventive technical contribution required for such a modification.
- 4.6 During the first instance proceedings the appellant argued in favour of an inventive step, because despite the long time between the date of publication of D1 to D3 and the priority date of the present application, nobody had come up with segments of an equal length before the priority date. This argument, however, is not convincing in the light of the disclosure in figure 6 of D2.
- 4.7 The subject-matter of claim 1 therefore lacks an inventive step in the light of D2 combined with the skilled person's common general knowledge.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chair:

B. Atienza

A. Ritzka