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Datasheet for the decision of 25 May 2010

Case Number: T 1906/07 - 3.4.01

Application Number: 05102854.6

Publication Number: 1592084

IPC: H01Q 1/38, H01Q 5/00

Language of the proceedings: EN

Title of invention:
Antenna element and method for manufacturing the same

Applicant:
Pulse Finland Oy

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 123(2)

Relevant legal provisions (EPC 1973):
EPC Art. 84, 54, 56

Keyword:
-

Decisions cited:
-

Catchword:
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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1906/07 - 3.4.01

D E C I S I O N
of the Technical Board of Appeal 3.4.01
of 25 May 2010

Appellant: Pulse Finland Oy
Takatie 6
FI-90440 Kempele (FI)

Representative: Tanhua, Pekka Vilhelm
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Kirkokatu 9
FI-90100 Oulu (FI)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 6 July 2007 refusing European application No. 05102854.6 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: B. Schachenmann
Members: G. Assi
P. Fontenay

Summary of Facts and Submissions

I. The European patent application No. 05102854.6 (publication number 1 592 084) was refused by the examining division with a decision dispatched on 6 July 2007 on the grounds that the application did not meet the requirements of Articles 84 and 56 EPC 1973.

II. The applicant (appellant) lodged an appeal, received on 7 September 2007, against the decision of the examining division. The appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 2 November 2007. With this statement the appellant filed sets of claims according to a main request and an auxiliary request.

III. With a communication of 16 March 2010 the appellant was summoned to oral proceedings before the Board scheduled to take place on 26 May 2010. The Board gave a provisional opinion on the case with a further communication of 30 March 2010. In particular, the Board did not consider the appellant's requests to be allowable.

With a reply of 26 April 2010 the appellant informed the Board that its representative would not attend the oral proceedings and filed a set of claims according to a further auxiliary request.

With a communication of 7 May 2010 the Board proposed amended application documents on the basis of which the grant of a patent might be envisaged.

With a reply of 17 May 2010 the appellant approved the application in the text proposed by the Board with the communication of 7 May 2010.

The oral proceedings appointed for 26 May 2010 were cancelled on 19 May 2010.

IV. The appellant requested in writing that the decision under appeal be set aside and a patent be granted on the basis of the following application documents:

- Claims 1-4 proposed by the Board with the communication of 7 May 2010;
- Description pages 1-7 proposed by the Board with the communication of 7 May 2010;
- Drawing sheets 1/4-4/4 proposed by the Board with the communication of 7 May 2010.

V. The wording of claims 1-4 reads as follows:

"*1. A radiating antenna element (300) of a multiband planar antenna, which element comprises a dielectric substrate (610) and a conductive coating (620) on one surface of the substrate, which coating is divided by an intermediate area (330) into at least a first (321) and a second (322) radiating conductor branch to form more than one operating band,* ***characterized*** *in that said conductive coating is also on said intermediate area (330), separated from the radiating conductor branches by a border groove (331) defining a line-like non-conductive area, the conductive coating on the intermediate area being divided into a plurality of separate conductor areas (CA1, CA2) by grooves (332, 333) forming a lattice pattern in order to make sure*

that the conductive coating on the intermediate area does not radiate or have any substantial effect on the electromagnetic coupling between the radiating conductor branches in the range of the operating bands of the antenna.

2. A radiating antenna element according to claim 1, ***characterized*** *in that it is a discrete component to be installed inside an outer cover (COV) of a radio device.*

3. A radiating antenna element according to claim 1, ***characterized*** *in that said dielectric substrate is a part of an outer cover (710) of a radio device.*

4. A method for manufacturing a radiating antenna element according to claim 1, ***characterized*** *in that said border groove (331) and the grooves (332, 333) which divide the conductive coating on the intermediate area into a plurality of separate conductor areas are implemented by evaporating (503, 505) the conductive coating on said dielectric substrate by means of a laser beam from narrow areas.*"

VI. The revised version of the European Patent Convention or EPC 2000 entered into force on 13 December 2007. In the present decision, reference will be made to "*EPC 1973*" or "*EPC*" for EPC 2000 (EPC, Citation practice, pages 4-6) depending on the version to be applied according to Article 7(1) of the Revision Act dated 29 November 2000 (Special Edition No. 1 OJ EPO 2007, 196) and the decisions of the Administrative Council dated 28 June 2001 (Special Edition No. 1 OJ EPO 2007, 197) and 7 December 2006 (Special Edition No. 1 OJ EPO 2007, 89).

Reasons for the Decision

1. The appeal is admissible.

2. Claim 1 essentially corresponds to claim 1 of the application as filed with the addition of the following text after "*border groove*" at the end of the claim: "*defining a line-like non-conductive area, the conductive coating on the intermediate area being divided into a plurality of separate conductor areas (CA1, CA2) by grooves (332, 333) forming a lattice pattern in order to make sure that the conductive coating on the intermediate area does not radiate or have any substantial effect on the electromagnetic coupling between the radiating conductor branches in the range of the operating bands of the antenna*". The expression "*defining a line-like non-conductive area*" is supported by the application as filed (page 4, lines 9 and 10). The rest of the amendment is supported by claim 3, page 4 (lines 20-36) and Figure 3 of the application as filed.

   Claims 2 and 3 correspond to claims 5 and 6 of the application as filed.

   Claim 4 essentially corresponds to claims 7-9, page 5 (line 23) to page 6 (line 3) and Figure 5 of the application as filed.

   The description has been adapted to the amended claims without introducing any new matter.

The drawings are unaltered with the exception of Figure 3 in which the reference signs "*321*" and "*322*" have been inserted.

Therefore, the application has not been amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC).

3. The Board does not have any objections with regard to the clarity of the claims (Article 84 EPC 1973). In particular, the Board does not find convincing the examining division's objection in the contested decision (point II.1.1) that "*The expression "line-like non-conductive area" is vague and imprecise and leaves the reader in doubt as to the meaning of the technical features to which it refers*". Indeed, the claimed "*border groove*" clearly has the function of separating the conductive coating on the intermediate area from the radiating conductor branches, whereby the meaning of the term "*groove*" is defined by the expression "*line-like non-conductive area*" in which both terms "*line-like*" and "*non-conductive area*" are clear per se.

4. During the examination procedure (communication of 24 February 2006 (point 4), communication of 4 October 2006 (point 4) and contested decision (point I.11)) the examining division did not have objections under Articles 54 and 56 EPC 1973 against the subject-matter of claim 3 of the application as filed. The Board agrees with this view. Indeed, none of the prior art documents on file shows or suggests a radiating antenna element according to present claim 1 which, as already

stated above, is based on claim 3 and Figure 3 of the application as filed.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the examining division with the order to grant a patent on the basis of the following application documents:

- Claims 1-4 proposed by the Board with the communication of 7 May 2010;
- Description pages 1-7 proposed by the Board with the communication of 7 May 2010;
- Drawing sheets 1/4-4/4 proposed by the Board with the communication of 7 May 2010.

The Registrar: The Chairman:

R. Schumacher B. Schachenmann