

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**Datasheet for the decision  
of 26 March 2012**

**Case Number:** T 2400/09 - 3.4.01

**Application Number:** 05019116.2

**Publication Number:** 1672736

**IPC:** H01Q 9/04, H01Q 1/24

**Language of the proceedings:** EN

**Title of invention:**  
Antenna apparatus for portable terminal

**Applicant:**  
Samsung Electronics Co., Ltd.

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 123(2)

**Keyword:**  
"Added subject-matter (yes, all requests)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 2400/09 - 3.4.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.4.01  
of 26 March 2012

**Appellant:** Samsung Electronics Co., Ltd.  
(Applicant) 416 Maetan-dong  
Yeongtong-Gu  
Suwon-si, Gyeonggi-Do (KR)

**Representative:** Grünecker, Kinkeldey,  
Stockmair & Schwanhäusser  
Anwaltssozietät  
Leopoldstrasse 4  
D-80802 München (DE)

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 17 June 2009  
refusing European patent application  
No. 05019116.2 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman:** P. Fontenay  
**Members:** H. Wolfrum  
M. J. Vogel

## Summary of Facts and Submissions

I. European patent application 05 019 116.2 (publication No. EP-A-1 672 736) was refused by a decision of the examining division dispatched on 17 June 2009, for the reasons of lack of clarity (Article 84 EPC 1973) and insufficiency of disclosure (Article 83 EPC 1973) of the requests then on file. By way of an obiter dictum, the examining division raised an objection as to lack of inventive step (Articles 52(1) and 56 EPC 1973) of the claimed subject-matter with respect to document D1: WO-A-98/56066.

II. The applicant lodged an appeal against the decision and paid the prescribed fee on 27 August 2009. On 27 October 2009 a statement of grounds of appeal was filed. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a main request or an auxiliary request, both filed with the statement setting out the grounds of appeal.

An auxiliary request for oral proceedings was made.

III. On 28 December 2011 the appellant was summoned to oral proceedings.

In a communication annexed to the summons, the Board drew the appellant's attention to various deficiencies concerning lack of clarity and an aspect of insufficiency of disclosure. As far as the claimed subject-matter was understood, it could be perceived to constitute a mere kinematical reversal of what was known from document D1.

IV. In response, the appellant filed by letter of 20 February 2012 amended sets of claims according to a main request and an auxiliary request.

V. Oral proceedings were held on 26 March 2012.

As a result of the discussion which concerned questions of added subject-matter, clarity and inventive step, the appellant confirmed its requests that the decision under appeal be set aside and a patent be granted, on the basis of the set of claims 1 to 3 filed on 20 February 2012 as the main request or on the basis of the set of claims 1 and 2 filed on 20 February 2012 as the auxiliary request.

VI. Claim 1 of the **main request** reads as follows :

"1. *A sliding type portable terminal (1) comprising:*  
a) *a body housing (2);*  
b) *a sliding housing (3) slidably movable to and from the body housing (2);*  
c) *an antenna apparatus (4; 100, 101, 102, 103) comprising a built-in antenna (4) with a radiation body (4a) provided in the body housing, and*  
*a variable movement antenna apparatus (100; 101, 102, 103) provided in the sliding housing (3) and the body housing (2) for variably moving a position of a second ground surface (102a) by separating a first ground surface (101) and the second ground surface by slidably moving the second ground surface (102a) in a lengthwise direction of the body housing (2) so as to be close to or remote from the first ground surface*

(101a), wherein said ground surfaces (101a, 102a) are arranged in parallel to said radiation body (4a),

wherein the variable movement antenna apparatus (100: 101, 102, 103)

further comprises:

- d) a fixed printed circuit board (101), said fixed printed circuit board mounted into the body housing (2), said body housing further comprising said first ground surface (101 a) electrically connected to the built-in antenna (4);
- e) a moving antenna board (102), said moving antenna board mounted in the sliding housing (3), and said second ground surface (101b) provided in the moving antenna board (102) for variably moving the relative position of the second ground surface of the antenna as the sliding housing is being slidably moved, wherein in said position close to the first ground surface (101a) the second ground surface (102a) is adapted to screen the built-in antenna and in said position remote from the first ground surface the built-in antenna is unscreened by said second ground surface, and
- f) a connecting means (103) mounted to said fixed printed circuit board (101) and said moving antenna board (102) for transferring signals between the fixed printed circuit board (101) and the moving antenna board (102), wherein the distance between the fixed printed circuit board and the moving antenna board is variable according to the slidable movement of the moving antenna board."

Claims 2 and 3 are dependent claims.

Claim 1 of the **auxiliary request** corresponds to claim 1 of the main request which is complemented by the

feature "*and wherein the connecting means (103) includes a flexible circuit adapted to vary its extension*".

Claim 2 is a dependent claim.

## **Reasons for the Decision**

1. In the following reference is made to the provisions of the EPC 2000, which entered into force as of 13 December 2007, unless the former provisions of the EPC 1973 still apply to pending applications.
2. The appeal complies with the requirements of Articles 106 to 108 EPC and Rule 99 EPC and is, therefore, admissible.
3. Amendments (Article 123(2) EPC)
  - 3.1 Feature c) of claim 1 of the main request and of the auxiliary request refers to a built-in antenna (4) with a radiation body (4a) as forming part of an antenna apparatus. No definition as to the type of the built-in antenna and the structure of its radiation body is given in the remainder of claim 1 of both requests, which comprises the requirement that a first and a second ground surface are arranged in parallel to said radiation body.
  - 3.2 However, when it comes to a radiation body in interaction with ground surfaces, the originally-filed application documents refer exclusively to a planar inverted F antenna (PIFA) (see original claim 5; and

page 5, line 19, to page 6, line 23, of the description as originally filed).

On the basis of the limited extent of information provided in the application documents as originally filed as to the nature of the antenna apparatus, the reference to an unspecified radiation body in claim 1 of the main request and of the auxiliary request constitutes an unallowable intermediate generalization in that it encompasses other antenna types and structures of the radiation body which have no basis of disclosure in the application documents as originally filed.

This is all the more true since the effects related to the screening and unscreening referred to in feature (e) of claim 1 of both requests are intimately associated with the configuration of PIFAs and nothing in the application documents as filed permits to generalize these effects to other types of antennas.

For this reason, claim 1 of both requests on file contains subject-matter which extends beyond the content of the application as filed, contrary to the requirement of Article 123(2) EPC.

- 3.3 Consequently, neither the main request nor the auxiliary request of the appellant is allowable.
- 3.4 The appellant did not argue in favour of a basis of disclosure for the intermediate generalization identified by the Board.

Moreover, taking into consideration the negative outcome of the Board's deliberation on the issue of inventive step, which deliberation concluded a thorough discussion of the matter in the oral proceedings, and taking into account that this outcome did not depend on the fact that the claims are not limited to a PIFA structure, the appellant abstained from any attempt of further amendment.

**Order**

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

The appeal is dismissed.

The Registrar

The Chairman

R. Schumacher

P. Fontenay