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**Datasheet for the decision
of 7 December 2012**

Case Number: T 0009/09 - 3.5.06

Application Number: 04250991.9

Publication Number: 1569067

IPC: G06F 1/16

Language of the proceedings: EN

Title of invention:

Handheld electronic device having a battery compartment door that includes a camera

Applicant:

Research in Motion Limited

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Battery compartment door/RIM"

Decisions cited:

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Catchword:

-



Case Number: T 0009/09 - 3.5.06

D E C I S I O N
of the Technical Board of Appeal 3.5.06
of 7 December 2012

Appellant: Research In Motion Limited
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 4 August 2008
refusing European patent application
No. 04250991.9 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: D. H. Rees
Members: S. Krischer
C. Heath

Summary of Facts and Submissions

I. The appeal is directed against the decision of the examining division, posted on 4 August 2008, to refuse the application 04250991. The reason for the refusal was lack of inventive step over the following document:

D1 US2002/0013161 A1, 31 January 2002.

II. A notice of appeal was received on 13 October 2008. The fee was received the same day. A statement of the grounds of appeal was received on 15 December 2008. Claim sets of a main and three auxiliary requests were filed. Oral proceedings were requested.

III. In its summons to oral proceedings, the board gave reasons for its preliminary opinion that the independent claim of all of the requests lacked an inventive step over D1.

IV. In a letter dated 7 November 2012, the appellant withdrew the main request and announced that it would not be represented at the oral proceedings.

V. Oral proceedings were held on 7 December 2012 in the absence of the representative, as announced. At their end, the chairman announced the board's decision.

VI. The appellant requests that the decision be set aside and a patent be granted on the basis of one of the first or second auxiliary requests (claims 1-9) or the third auxiliary request (claims 1-8), all filed with the grounds of appeal. The further text on file is: description pages 1-11 as originally filed, page 1a as

filed with letter dated 18 July 2006; drawing sheets 1-5 as originally filed.

VII. Claim 1 of the first auxiliary request reads as follows:

"1. A handheld electronic device (4) comprising:
a housing (8);
a battery (12) disposed on the housing (8);
the device characterised by:
the housing (8) having a compartment door (20) and a primary housing portion (16) having an exterior and a cavity (24) formed therein, the cavity (24) being in communication with the exterior of the primary housing portion (16);
the compartment door (20) separate from the battery (12) and having a panel (40) and a camera (48);
the panel (40) having an inner surface (56) and an outer surface (60);
the camera (48) being mounted to the panel (40) and disposed substantially opposite the outer surface (60);
the compartment door (20) being removably mounted to the primary housing portion (16) and substantially enclosing the cavity (24) with the battery disposed therein, the inner surface (56) of the panel (40) facing toward the cavity (24), the camera (48) being disposed substantially within the cavity (24), and the outer surface (60) facing away from the cavity (24);
the exterior of the primary housing portion (16) including an exterior surface (28);
the primary housing portion (16), ignoring the cavity (24), having an overall form factor; and

the outer surface (60) of the panel (40) being disposed substantially flush with the exterior surface (28) adjacent the cavity (24) in order that the overall form factor of the primary housing portion (16) is substantially unaltered by the compartment door (20) being mounted to the primary housing portion (16)."

This claim is identical to claim 1 of the auxiliary request refused by the examining division, except in its designation of the characterising portion.

VIII. Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that the paragraph starting from line 5 reads (differences marked in *italics*):

" the housing (8) having a compartment door (20) and a primary housing portion (16) having an exterior and a cavity (24) formed *in an exterior surface of the primary housing portion*, the cavity (24) being in communication with the exterior of the primary housing portion (16);"

and in that the specification of the camera position reads:

"the camera (48) being mounted to the panel (40) and disposed substantially opposite the outer surface (60) *and substantially within the cavity*;"

IX. Claim 1 of the third auxiliary request differs from claim 1 of the first auxiliary request in that the word "*first*" is added to every occurrence of "compartment

door" and "panel", in that the compartment door is defined thus:

" the *first* compartment door (20) being removably mountable to the primary housing portion (16) to substantially enclose the cavity (24) with the battery disposed therein, ..."

and in that the following phrase (mainly stemming from claim 9 of the first auxiliary request) is added at the end:

" the device also having a second compartment door (136), interchangeable with the first compartment door (20), the second compartment door having a second panel (40') and also being removably mountable to the primary housing portion (16) to substantially enclose the cavity (24) with the battery disposed therein, an outer surface of the second panel being disposed flush with the exterior surface (28) adjacent the cavity (24) in order that the overall form factor of the primary housing portion (16) is substantially unaltered by the second compartment door (136) being mounted to the primary housing portion (16)."

Reasons for the Decision

1. *Inventiveness*

The invention relates to a mobile device (e.g. a phone) with interchangeable battery compartment doors, one of them with a built-in photo camera and the other without. This is useful, for example, if one wants to carry the

device (i.e. in the case of a phone, be available to be called) in areas where picture taking is forbidden.

1.1 First auxiliary request

1.1.1 In the appealed decision, claim 1 of the main request was refused for lack of inventive step over document D1. The differences with D1 were identified in section 2.2 of the decision as (the wording being simplified by the board):

- (i) a cavity for receiving the battery;
- (ii) the overall form factor of the electronic device is unaltered by the mounted compartment door;
- (iii) the compartment door and the battery are independent of one another.

Claim 1 of the auxiliary request, which corresponds to the present first auxiliary request, was said (in section 4) to have the following further features:

- (a) the compartment door is separate from the battery;
- (b) the battery is disposed in the cavity when the compartment door substantially encloses the cavity.

1.1.2 As to feature (i), the decision says that it is not explicitly mentioned in D1, "though suggested by figure 1" (section 2.2, (i)). The board agrees with that and considers that feature (i) is implicitly present in D1, since otherwise the space needed by the battery (15) of figure 2 would be visible as a protrusion in figures 1 and 2. Note that figure 1 shows a telephone (48) together with a camera/battery module (10) (see section [29], second sentence). The only

visible protrusion in figures 1 and 2 is at the upper part of the telephone's back where the camera is placed.

1.1.3 The grounds of appeal (page 3, first paragraph) identified the following additional differences:

- (ii') a compartment door;
- (iii') a cavity in the primary housing portion;
- (iv') the compartment door substantially closing the cavity with the camera being disposed substantially within the cavity.

1.1.4 However, the board considers feature (ii') to be disclosed in figure 2 of D1. It is hardly conceivable that the mobile phone of D1 would not have a compartment door.

1.1.5 Feature (iii') corresponds to feature (i) above which is considered to be present in D1.

1.1.6 The board considers that feature (a) is merely a reformulation of feature (iii). Feature (b) is a reformulation of feature (iv').

1.1.7 Thus, claim 1 differs from D1 by features (ii), (iii) and (iv').

1.1.8 Feature (ii) reads literally in the claim:

"the outer surface (60) of the panel (40) being disposed substantially flush with the exterior surface (28) ... in order that the overall form factor of the primary housing portion (16) is substantially unaltered by the compartment door (20) ..."

In other words, the claim defines that the compartment door (20) does not cover the whole back of the device, but that there is a surface (28) of the primary housing (16) which is flush with the outer surface (60) of the compartment door.

In contrast to that, figures 2 and 3 of D1 disclose compartment doors that cover the whole back of the device.

1.1.9 The appealed decision considered it to be a normal design procedure to select the size of the modules and the extent to which they protrude from or are recessed into the housing (section 2.2, last paragraph of page 4). It further argued in section 6.1 on page 7:

"However, the skilled person would immediately realise that in a situation where it is of utmost importance for aesthetic design purposes that the specific ergonomic contour of the device remain unaltered, the skilled person would provide the thickness of both modules accordingly, sacrificing some battery power in return for the space to provide the camera functionality."

1.1.10 The grounds of appeal stated that it is highly desirable to maintain the form factor (page 3, last sentence), and that no evidence is offered by the examining division for the above statement which could be seen to go against the express teaching of D1 (page 5, last paragraph).

1.1.11 The board adopts the view of the examining division and is of the opinion that if a skilled person would consider it desirable to maintain the form factor, he

would adapt the form of the camera/battery module to the housing of the phone, and accept one disadvantage (less battery power for the camera and the telephone) in favour of the advantages of an unaltered form factor (as put forward in the grounds of appeal, page 4, first paragraph). Alternatively, if battery power was considered to be a critical issue, the skilled person would use the form factor of the telephone with the camera/battery module, and simply leave the space which would have been taken by the camera empty. This appears to be the option actually chosen by the appellant (compare figures 2 and 5 of the application). Clearly, in this case the appellant is accepting the disadvantage that the unit as a whole is bulkier than it need be without a camera. Document D1 exchanges the advantages of a constant form factor for the advantages of reduced bulk. The board considers this to be a straightforward trade-off issue which would have been obvious to the skilled person.

1.1.12 As to feature (iii), the board does not see the need to argue as in the impugned decision (page 5, first paragraph) that the feature would be readily adopted by the skilled person if more flexibility is desired for the user, e.g. to allow him to use a standard battery or to replace a battery without replacing the camera.

1.1.13 The reason is that the board considers it hardly conceivable that the functionally different unities "compartment door" and "battery" would not be somehow "separate". "Separate" does not necessarily mean "separable" or "disconnectable". The fact that they are separate elements could still include some kind of mounting (removably or not) or integration (as in D1)

as a possibility. However the board also takes the view, implicit in the examining division's assessment, that an easily removable battery would also have been an obvious design option at the filing date.

1.1.14 Furthermore, the board does not consider feature (iii) to imply that the battery remains in the cavity when the compartment door is removed. The battery may well be attached to the compartment door and remain in contact with the compartment door when the latter is removed, until the battery is explicitly detached from the compartment door. The board also could not find any passage in the original description that would disclose the contrary. Figures 2 and 4, indicated in the grounds of appeal (section 2.2) as a basis in the original application, do indeed disclose that the compartment door is separate from the battery (i.e. feature (iii)), but not that the battery remains in the cavity when the compartment door is removed.

1.1.15 Therefore, the technical effect that "the doors can be swapped without disconnecting the battery" (grounds of appeal and letter dated 12 June 2008, sections 2.3.2) is only present in specific embodiments of the invention that are not originally disclosed. The other effect mentioned, namely that only one battery is needed when swapping the compartment doors, is also only present if a removability of the battery is given.

1.1.16 Furthermore, the appellant did not indicate a passage in the original description disclosing that the battery remains in the cavity when removing the compartment door, or that the battery is removable. Thus even if they were unobvious (which the board does not consider them to be - see above) these features are not claimed

(or apparently even disclosed) and therefore cannot contribute to an inventive step.

1.1.17 As to feature (iv'), D1 seems to be silent about whether the camera is in a cavity or in a protrusion of the compartment door. However, the board takes the view that either of these alternatives are obvious.

1.1.18 The appellant further stated on page 3, paragraph 3 of the grounds of appeal that it considers the expressions "compartment cover" and "compartment door" to be different, since there would be no cavity behind a compartment cover. In absence of any evidence that the skilled person would understand the terms as making this distinction, the board is not convinced and does not consider this to be a differentiating feature.

1.1.19 In its letter dated 7 November 2012 (i.e. after reception of the summons), the appellant indicated that the technical problem to be solved by the aforementioned differentiating features (ii), (iii) and (iv') was to provide an ergonomic, cost effective solution to enable switching between camera-present and camera-absent configurations (page 2, paragraph 2). However, the board does not accept that the solution with these features is more ergonomic nor more cost effective than the device of D1. To the contrary, the fact that the compartment door without a camera of D1 (called standard battery module in D1, see figure 3) is thinner and lighter than that with a camera (figure 2; see end of paragraph [29]) seems to be more ergonomic and more cost effective than the claimed solution where the empty space otherwise filled by the camera remains unused.

1.1.20 Therefore, claim 1 of the first auxiliary request is not inventive, in violation of Article 56 EPC.

1.2 Second auxiliary request

1.2.1 Claim 1 of this request contains in addition to the first auxiliary request that (a) the cavity is formed in an exterior surface of the primary housing portion, and (b) the camera is disposed substantially within the cavity.

1.2.2 Feature (b) is already present in claim 1 of the first auxiliary request at line 17 (in the second paragraph which starts with "the compartment door").

1.2.3 As to feature (a), the grounds of appeal (section 3.3) do not give any indication of a technical effect achieved by it nor any reason why it would imply an inventive activity. The board cannot see any such effect.

1.2.4 The appellant indicated in his letter dated 7 November 2012 the same technical effect for this request as for the first auxiliary request, i.e. ergonomics and cost-effectiveness. However, the board cannot recognise that feature (a) would increase them. Moreover, forming a cavity in the exterior surface of the primary housing (i.e. feature (a)) is considered to be the standard way (at the filing date) for placing a battery in a mobile phone.

1.2.5 Therefore, claim 1 of the second auxiliary request is not inventive, in violation of Article 56 EPC.

1.3 Third auxiliary request

1.3.1 Claim 1 of this request differs from the first auxiliary request by adding claim 9 of the first auxiliary request to claim 1, and by adding "first" to "compartment door" and "panel". Thus, the main addition is the explicit mentioning of the alternative compartment door without a camera. This feature is disclosed in D1, figure 3 and paragraph [29].

1.3.2 The grounds of appeal (section 3.3) do not give any indication of a technical effect achieved by the added features nor any reason why they would imply an inventive activity. The board cannot see any such effect.

1.3.3 In his letter dated 7 November 2012, the appellant indicated the same technical effect for this request as for the first and the second auxiliary request, i.e. ergonomics and cost-effectiveness. The alternative compartment door had already been considered in the reasoning relating to the first and the second auxiliary request which applies here accordingly.

1.3.4 Therefore, claim 1 of the third auxiliary request is not inventive, in violation of Article 56 EPC.

1.4 Thus, none of the requests fulfils the requirements of inventive step, in violation of Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

B. Atienza Vivancos

D. H. Rees