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**Datasheet for the decision  
of 16 October 2012**

**Case Number:** T 0648/09 - 3.5.04

**Application Number:** 03017648.1

**Publication Number:** 1392045

**IPC:** H04N1/21

**Language of the proceedings:** EN

**Title of invention:**

Alert generating system and method for a digital camera  
embedded in a mobile communication terminal

**Applicant:**

LG Electronics, Inc.

**Headword:**

**Relevant legal provisions:**

EPC 1973 Art. 56

**Keyword:**

Inventive step - (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
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Chambres de recours**

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Case Number: T 0648/09 - 3.5.04

**D E C I S I O N**  
**of the Technical Board of Appeal 3.5.04**  
**of 16 October 2012**

**Appellant:** LG Electronics, Inc.  
(Applicant) 20, Yoido-Dong, Youngdungpo-gu  
Seoul (KR)

**Representative:** Beyer, Andreas  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted 6 November 2008  
refusing European patent application No.  
03017648.1 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman:** F. Edlinger  
**Members:** R. Gerdes  
C. Vallet

## **Summary of Facts and Submissions**

- I. The appeal is directed against the decision to refuse European patent application No. 03 017 648.1.
- II. The patent application was refused by the examining division in accordance with Article 97(2) EPC because the subject-matter of claims 1 and 7 according to the applicant's sole request was found to lack inventive step in view of the prior-art document  
  
D4: JP 2001-169175 A together with a machine translation into English.
- III. With the statement setting out the grounds of appeal the appellant submitted document D4E, a translation into English of D4.
- IV. With a letter dated 16 September 2012 the appellant filed amended claims according to a main request and first to fourth auxiliary requests.
- V. Oral proceedings before the board were held on 16 October 2012. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of one of the main request, or the first to fourth auxiliary requests filed with the letter of 16 September 2012.
- VI. Claim 1 of the main request reads as follows.  
  
"An apparatus for controlling a digital camera of a mobile communication terminal, the apparatus comprising:  
- a switch (100) configured to initiate a photographing operation;

- a photographing indication unit (600) configured to generate an audible indication indicating that a photographing operation is being performed, the audible indication being perceptible to people in the vicinity of the mobile communication terminal;
- a photographing function unit (300) configured to convert a photographed external image into a digital image data; and
- a controller (200) configured to control the photographing indication unit (600) and the photographic function unit (300) when a photographing operation is initiated such that the photographing indication unit (600) generates said audible indication in conjunction with performing the photographing operation regardless of the photographing indication unit (600) being inactivated by connection of an earphone to the mobile communication terminal."

VII. Claim 1 of the first auxiliary request reads as follows (amendments to claim 1 of the main request have been indicated by underlining the new or amended passages and by striking through the omitted passages):

"An apparatus for controlling a digital camera of a mobile communication terminal, the apparatus comprising:

- a switch (100) configured to initiate a photographing operation;
- a photographing indication unit (600) configured to generate an audible indication indicating that a photographing operation is being performed, the audible indication being perceptible to people in the vicinity of the mobile communication terminal;
- a photographing function unit (300) configured to convert a photographed external image into a digital image data; and

- a controller (200) configured to control the photographing indication unit (600) and the ~~photographic~~ photographing function unit (300) when a photographing operation is initiated, wherein the apparatus has an external output function in which the speaker is operated and wherein the external output function is stopped when an earphone is connected to the apparatus, wherein ~~such that~~ will [sic] the photographing indication unit (600) generates said audible indication in conjunction with performing the photographing operation regardless of the photographing indication unit (600) being inactivated by connection of an earphone to the mobile communication terminal."

VIII. Claim 1 of the second auxiliary request is distinguished from claim 1 of the first auxiliary request by its first feature which was modified to read:

"A mobile communication terminal having an apparatus for controlling a digital camera integrated in said mobile communication terminal, the apparatus comprising: ...".

In addition, the expression "by operating said switch (100)" was appended after the words "when a photographing operation is initiated".

IX. Claim 1 according to the third auxiliary request is identical to claim 1 of the second auxiliary request except that the phrase ", by exclusively using functions of the mobile communication terminal," was added after "a controller (200) configured to control".

- X. Claim 1 of the fourth auxiliary request corresponds to claim 1 of the second auxiliary request with the following feature being appended to the claim:

", and wherein the controller (200) is further configured to disable the photographing function unit (300) when the photographing function unit (600) is not functional."

- XI. The appellant's arguments with respect to inventive step of the claimed subject-matter may be summarised as follows.

*Re: main request*

Even though D4 has to be considered as the closest prior art, it relates to a completely different system from the invention. D4 does not contain any hint on using an earphone mode or its advantages, such as the reduction of concerns regarding possible health risks due to radiation exposure. Moreover, it shows the generation of an audible indication only as one of several possibilities to avoid unauthorised image capturing and, finally, it relies on the detection of an "unauthorized capturing prevention information generation device" (in the following referred to as a "badge") which is carried by people who do not want to be photographed.

In terms of claim 1, D4 does not disclose a controller configured to generate an audible indication in conjunction with performing the photographing operation regardless of the photographing indication unit being inactivated by connection of an earphone to the mobile communication terminal. Hence, starting from D4 the technical problem should be formulated as how to

provide a mobile terminal with an alternative unauthorised image capturing indication system. Multiple steps would have been necessary for the skilled person to arrive at the claimed solution. Firstly, the skilled person would have had to consider adding an earphone mode. Secondly, the skilled person would have had to realise that the indicating signal generation device (a badge, which is detected by the mobile communication device) can be omitted in D4. And, thirdly, the skilled person would have had to bypass the earphone mode in the case of an image capturing operation. All these steps were not straightforward. For example, even if D4 was modified to employ an earphone it would not have been obvious to generate the audible indication regardless of the speaker being inactivated by connection of the earphone. Instead, any alternative solution presented in D4 could have been used to prevent unauthorised image capturing.

*Re: first auxiliary request*

The additional feature of claim 1 according to this request serves to further distinguish the usual functioning of the earphone mode over D4.

*Re: second and third auxiliary requests*

The modifications of the independent claims according to these requests serve to indicate that the mobile communication terminal itself constitutes a complete stand-alone system without the need for external components such as the badge of D4.

*Re: fourth auxiliary request*

The appended feature of claim 1 provides the further limitation that the photographing function of the mobile communication device is inhibited if the audible indication is not functional, for example due to manipulation of the mobile communication device. This achieves the technical effect that - even in case of manipulation - images cannot be captured without authorisation. The teaching of D4, paragraph [0018] relating to an alternative solution to prevent unauthorised image capturing and paragraph [0056], which refers to countermeasures against manipulation, cannot be combined without "mosaicing" from different embodiments of D4.

### **Reasons for the Decision**

1. The appeal is admissible.
2. Main request
  - 2.1 It is common ground that D4 may be considered as the closest prior art with respect to the subject-matter of claim 1. D4 discloses a mobile phone with an integrated camera for taking photographs and transmitting them wirelessly to remote places. D4 is concerned with the problem of "effectively and reliably" detecting and preventing a user from taking unauthorised photographs of persons in the vicinity of the mobile phone (see D4E, paragraphs [0003], [0015], [0016]). In order to solve this problem, photos are captured by a camera sensor and subsequently output as a digital signal to a digital signal processor (see D4, figure 5: 4, 5 together with D4E, paragraphs [0041] and [0054]). The photos are analysed to identify a particular shape, colour, blinking pattern, etc. of an "unauthorized



capturing prevention information generation device", such as a badge, attached to a person to indicate that the person does not wish to be photographed. According to one embodiment of D4 an "unauthorized capturing prevention voice signal" is generated "so that ... a person near the imaging device can listen to it", if unauthorised image capturing is detected (see D4, figure 5 together with D4E, paragraphs [0029], [0054] and [0055]). Alternative embodiments in D4 include turning off the image capturing function, the display of a warning image instead of the captured photo, or inhibiting transmission of the photo (see D4E, paragraphs [0018], [0019] or [0024]).

2.2 In order to perform the above functions the mobile communication terminal of D4 necessarily has to have the functionality of a switch to initiate a photographing operation and of a controller configured to generate the audible indication in conjunction with performing the photographing operation. Thus, as argued by the appellant and accepted by the board, the subject-matter of claim 1 is distinguished from D4 by its last feature, i.e. that the controller of claim 1 is configured to generate an audible indication in conjunction with performing the photographing operation regardless of the photographing indication unit being inactivated by connection of an earphone to the mobile communication terminal.

2.3 Advantages and disadvantages of an earphone mode were well-known at the priority date of the present application. For instance, sound quality may be improved for a user if an earphone is connected to a mobile phone. Furthermore, sound may be listened to without disturbing other people. It was also confirmed by the appellant that at "the time of the priority date

of the pending patent application, it became more and more popular to use mobile communication terminals with earphones, because there was an intense discussion about the health risks of using mobile communication devices" (see statement of grounds, page 2, third paragraph). Nothing is said in the present application as to which of these effects is essential for the claimed invention. Hence, in the absence of further considerations the technical effect achieved by the connection of earphones, as specified in claim 1, can be regarded as one or several of the well-known effects, such as an improved sound quality, avoiding disturbance of other people and reduced concern about health risks. At the same time, the distinguishing feature of claim 1 ensures that the unauthorised capturing prevention functionality of the mobile communication terminal is preserved. Hence, starting from D4 the board regards the technical problem as how to achieve the well-known effects of an earphone mode and at the same time ensure that the unauthorised capturing prevention functionality of the mobile phone is preserved.

- 2.4 To solve this technical problem, the skilled person would have been incited to envisage the use of earphones in the mobile communication terminal of D4. As accepted by the appellant, it follows as a necessity from the usual functioning of mobile phones together with earphones at the priority date of the application that the audible indication of D4 would have been suppressed (see also statement of grounds, page 2, third paragraph). Hence, in view of the objective set out in D4 of "effectively and reliably" detecting and preventing a user from taking unauthorised photographs, the skilled person would have had to preserve this functionality of the mobile phone, but could have

chosen one of the several alternatives to an audible warning disclosed in D4, as rightly argued by the appellant. Nevertheless, the board holds that it would have been obvious to preserve the audible warning to a person being photographed and to think about ways to overcome the suppression of the warning sound in the earphone mode. Possible solutions overcoming the problems in the earphone mode were straightforward, be it the addition of a separate speaker for the audible indication of unauthorised photographing, or the adaptation of the controller's operation so as to generate the audible indication in conjunction with performing the photographing operation regardless of the photographing indication unit being inactivated by connection of an earphone to the mobile communication terminal. Both solutions result in an apparatus as specified in claim 1.

2.5 Hence, the subject-matter of claim 1 was obvious to a person skilled in the art in view of D4 and thus lacks an inventive step (Article 56 EPC 1973).

2.6 The board essentially accepts the appellant's argument that D4 relies on the detection of a badge which is carried by people who do not want to be photographed. However, the use of such devices is not excluded by the definition of the invention in claim 1. The board is also not convinced that the technical problem as formulated by the appellant is in fact the objective technical problem. Starting from D4 there is no need for a mobile terminal with an alternative unauthorised image capturing indication system, to preserve the unauthorised capturing prevention functionality. None of the alternatives to an audible indication disclosed in D4 would have achieved the technical effects that are caused by the distinguishing feature of claim 1.

3. First auxiliary request

3.1 Claim 1 of the first auxiliary request is essentially distinguished from claim 1 of the main request by the following feature:

"wherein the apparatus has an external output function in which the speaker is operated and wherein the external output function is stopped when an earphone is connected to the apparatus".

3.2 The presence of this feature has been assumed in the reasoning with respect to claim 1 of the main request (see point 2 above, in particular, point 2.4, second sentence). Hence, this reasoning applies likewise to claim 1 of the first auxiliary request.

3.3 It follows that the subject-matter of claim 1 also lacks an inventive step (Article 56 EPC 1973).

4. Second and third auxiliary requests

4.1 Claim 1 of the second auxiliary request relates to "A mobile communication terminal having an apparatus for controlling a digital camera integrated in said mobile communication terminal" instead of "An apparatus for controlling a digital camera of a mobile communication terminal" as in claim 1 of the main request. It is also specified that the photographing operation is initiated "by operating said switch".

Claim 1 of the third auxiliary request additionally specifies the operation of the controller to exclusively use functions of the mobile communication terminal.

4.2 The board holds that these modifications do not essentially change the reasoning with respect to lack of inventive step of the claimed subject-matter (see point 2 above). In particular, the board is not convinced by the appellant's argument that these modifications imply that the claimed mobile communication terminal is restricted to a complete stand-alone system without the need for external components such as the badge of D4. It is correct that D4 relies on detecting a badge to inhibit unauthorised image capturing, but the badge is a passive device, images of which are taken by the camera sensor and processed to detect it. Hence, also according to D4 the complete functionality for generating the audible indication in conjunction with performing the photographing operation is integrated into the mobile communication terminal. The presence of a badge as a further condition for generating the audible indication is not excluded by claim 1.

4.3 As a result, the subject-matter of claim 1 according to the second and third auxiliary requests also lacks an inventive step (Article 56 EPC 1973).

5. Fourth auxiliary request

5.1 The appended feature of claim 1 provides the further limitation that the photographing function unit of the mobile communication device is disabled if the photographing indication unit is not functional.

5.2 The board accepts the appellant's argument that this feature is not disclosed in D4 and that it provides the additional technical effect that manipulation of the mobile communication terminal to bypass its

- functionality for preventing unauthorised image capturing is made more difficult (see paragraph [0032] of the description).
- 5.3 The risk that privacy protection measures may be bypassed by manipulation was well-known and is also referred to in D4 (see D4E, paragraphs [0056] and [0057]). Thus, starting from D4 the skilled person would be faced with the additional technical problem of preventing manipulation of the unauthorised image capturing prevention functionality by technical means.
- 5.4 Preserving the audible indication regardless of the connection of an earphone and preventing manipulation of the functionality (ensuring its proper functioning) relate to partial problems of the unauthorised image capturing prevention functionality. At this level of generality, the board cannot see any interaction going beyond the individual effects of providing a technical warning function and making sure that it cannot be easily manipulated. The additional technical problem and its solution may therefore be considered separately.
- 5.5 At the priority date of the present application it was a common countermeasure against manipulation to disable operation of a device if manipulation was detected (e.g. inhibiting further attempts to enter a personal identification number for a credit card or a portable phone after a certain number of unsuccessful attempts). D4 too (see Abstract and claim 2) contemplates that the image capture function may be turned off if a badge is detected in the image signal. Although this relates to the intended unauthorised image capturing prevention functionality, it shows that disabling the photographing function in case of a risk of an

unauthorised photograph being taken was a straightforward measure. The same is true for a manipulated communication terminal. Hence, the board considers the solution to the above additional technical problem to be a usual measure and thus obvious for the skilled person. The additional feature of claim 1 of the fourth auxiliary request therefore does not give rise to an inventive step (Article 56 EPC 1973).

6. It follows from the above that none of the appellant's requests is allowable.

## Order

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

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

F. Edlinger

Decision electronically authenticated