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Appeal number:

T2630/17-3.5.06

**Communication of the Board of Appeal pursuant to Article 15(1) of the Rules of
Procedure of the Boards of Appeal**

The Rapporteur

Martin Müller



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Annex(es):

Communication text

A preliminary study of the present appeal has been carried out.
The following observations are made without prejudice to the
final decision of the board.

1. The appeal is against the decision of the examining
division, with reasons dispatched on 19 July 2017, to
refuse European patent application No. 10 194 359 for
lack of novelty or inventive step, Articles 54 and 56
EPC, over the documents

D6: C Plaisant et al., "Touchscreen toggle design",
Proc. of the ACM Conference Human Factors in
Computing Systems, pages 667-668, 1992 and
D8: "N1 Quick start Guide", 2004.

Further documents were mentioned in the decision but
not relied upon in its reasons.

2. The appellant requests that the decision be set aside and a patent be granted on the basis of claims 1-12 according to a main or one of two auxiliary requests as filed with the grounds of appeal, the other application documents being

description, pages

3-40, 42, 48-50 as originally filed,

41, 43-47 filed with letter of 23 September 2011,

1, 2, 2a filed on 22 January 2016,

2b filed on 25 April 2017, and

drawings, sheets

1-15 as originally filed.

The invention

3. The application relates to a gesture based procedure for unlocking the touch screen of a portable computing device such as a mobile phone - or, more generally for "transitioning [...] between" first and second "user interface states" (see paragraphs 2-6) - and to providing visual cues for supporting the user in the process.
- 3.1 A typical interface according to the invention is depicted in figures 4A-B and 5A-C. The user is supposed to "drag" an "unlock image" (402) along a predefined path (404) to unlock the device. This mechanism has become known as "slide-to-unlock".
- 3.2 Furthermore, it is proposed to give "sensory feedback of the progress" of the required gesture by "transitioning an optical intensity of one or more user interface objects associated with the second user interface" (see paragraph 82). The "optical intensity of a user-interface object" is said to be "the object's degree of visual materialization" in a broad sense, subsuming

transparency effects or other means of "visual differentiation" (see paragraphs 85-87 and figures 8A-8C).

- 3.3 The following typical situation is considered (see paragraph 91 and figures 7A-7D). A mobile phone may be locked, displaying the unlock image (702, 704), when a prompt on the screen (706) indicates an incoming call. The user may then start dragging the unlock image in order to be able to accept or decline the call. Once the unlock gesture has started, the interface may display "a set of virtual buttons" (see paragraph 92 and 708), the optical intensity of which increases as the user drags the unlock image. The user cannot activate these buttons - in particular: decline or accept the incoming call - until the device has been unlocked (see paragraphs 92 and 93).
- 3.4 The application also discloses that several unlock images may be displayed, each of which being associated with an individual application such as a messaging or a music application (see paragraphs 105-107 and figures 11A-11F).

Article 123(2) EPC

4. The independent claims of all three requests specify that "progress of a gesture input" is indicated "by transitioning an optical intensity of one or more user interface objects" and that, in the process, at least one of the user interface objects "appear[s] and increas[es] in optical intensity".
- 4.1 The first of these features is originally disclosed in paragraph 82. The second feature, however, according to which the user interface objects "appear" is disclosed in the description only in the context of the telephony application (see paragraph 92). The term "appear" also occurs in the originally filed independent claims, but

there is limited by the feature that the user interface objects are "associated with the second user-interface state".

- 4.2 In view of this, it will have to be discussed whether the wording of the present claims remains within the content of the application as originally filed, Article 123(2) EPC. The fact that details of the user interface objects appearing and changing in optical intensity are only disclosed in the context of the telephony application may also be relevant for future amendments.

Clarity, Article 84 EPC, and claim construction

5. A central feature of the independent claims is that "progress of a gesture input", the gesture being needed to "transition [from a first] to a second user-interface state", is indicated "by transitioning an optical intensity of one or more user interface objects".
- 5.1 It may have to be discussed in this regard whether the term "user-interface state" is clear, Article 84 EPC. It would seem that two user-interface states might differ in as little as the value of a Boolean variable or the value of a counter, for instance indicating the number of completed gestures, and it is not clear whether the user interface is functionally different in the two states. As a consequence, the effect of a completed gesture input is unclear and can, as it seems, not be taken into account in the assessment of inventive step.
- 5.2 These comments also apply to the independent claims of auxiliary request 1. They specify that the user may interact with the user interface objects "when the device is in the second user interface state" without

apparently excluding that the user can interact with them in the first user interface state, too. Hence, the possibility of interacting with the buttons - or lack thereof - does not seem to distinguish the user-interface states.

- 5.3 It will also have to be discussed what it means for the change in optical intensity to "indicate" the progress. While it seems clear that the optical intensity changes "with" the progress of the input gesture, a specific instance of this being specified in the independent claims of auxiliary request 2, the verb "indicates" seems to make reference to the user's perception of that change. It is not self-evident if, and to what extent, the reference to the user's perception can limit the claimed user interface mechanism. This also seems to be a central issue in the inventive step assessment (see below).

The prior art

6. D8 is a user's guide to the Neonode mobile phone. In order to unlock the device, the user must press the power button once and then make a sweeping gesture on the touch screen (see page 8, last paragraph, page 9, "Keylock - Unlocking the Unit", and page 11).
7. D6 discusses alternative designs for toggle switches on touch screen interfaces. *Inter alia* it discloses a slider toggle which the user can "grab" and "slide" to the other side (see page 668, left column, paragraph 5), and that "the slider lever or pointer should highlight when touched to signify that the user now has control over it" (right column, lines 8-10).

Inventive step

8. The examining division started its inventive step assessment from D8, and the board agrees with this choice.
9. D8 discloses the subject matter of the preamble and the last two lines of claim 1. It does not disclose that
 - (a) as part of the gesture input a user-interface object "appear[s] and increas[es] in optical intensity", that
 - (b) thereby the "progress of the gesture input" is visualised (or "indicated"), that
 - (c) the user can interact with that user-interface object" in the second user-interface state (auxiliary request 1), or that
 - (d) the optical intensity changes "smoothly at a predefined rate in according with completion of the gesture" (auxiliary request 2).

As regards the main request and auxiliary request 1, this is in line with the decision under appeal (see reasons 16.3 and 18.3). Feature (d) of auxiliary request 2 was not contained in any independent claims of the requests decided upon by the examining division.

10. The examining division found that differences (a) and (b) address the problem of "how to provide visual feedback to a user about the [ongoing] transition" from one to another interface state (see reasons 16.5 and 18.5). The appellant considers a similar, if slightly more specific formulation, mentioning that the feedback not only relates to an "ongoing transition"

but also indicates the "progress of [the] transition" (see grounds of appeal, page 3, paragraph 4 from the bottom). The "specific manner" according to feature (d) in which the progress is indicated, however, was found not to have a technical effect (see the decision, reasons 18.4.5).

- 10.1 The examining division further took the view that the skilled person, in order to solve the problem posed, would consider combining the teachings of D8 and D6. The board tends to agree, that the skilled person, seeking to provide feedback on the unlocking gesture of D8, would consider the recommendations of D6 on how to display toggle buttons or switches.
- 10.2 The appellant states that "In seeking to address this problem the skilled person would not (indeed could not) combine the teaching of D8 with that of D6 to arrive at the claimed subject matter" (see grounds of appeal, page 3, paragraph 3 from the bottom). However, as the board understands the appellant's subsequent discussion (see in particular the grounds of appeal, page 5, first sentence and paragraph 4), it does not seem to challenge that the skilled person *would consider* a combination of D8 and D6, but merely that, when doing so, the skilled person *would be able to arrive* at the claimed invention.
- 10.3 The examining division interpreted the teaching of D6 to highlight the slider lever or pointer when touched as disclosing an element appearing on the screen and, *ipso facto*, increasing in optical intensity (see reasons 16.7, first paragraph). The independent claims of the main request thus lacked inventive step over D8 in view of D6 (see reasons 16.7, paragraphs 2 and 3).

- 10.4 The board tends not to understand the "highlighting" according to D6 in the sense of a newly appearing user interface object. Page 668, left column, lines 20 to 22, mentions the slider having a three-step animation of a "yellow pointer", which the board understands to mean that the pointer can only be in the left-, middle- or right-position and is always yellow. The board understands page 668, right column, lines 5 to 10, in the sense that the (yellow) slider is always visible but becomes "more visible", i.e. is "highlighted", when touched by the user. The board understands "highlighting" in this context as "making more visible", which could cover a change in colour as well as a change in intensity.
- 10.5 Nonetheless, highlighting (in the sense of making more visible) an object on a user interface seems to be an obvious option. For example, a text object "ON" might be made to appear on the slider during the input gesture.
- 10.6 The independent claims require the newly appearing user interface object to "appear and increas[e] in optical intensity". Arguably, these are two different requirements, whereas the examining division argued that the optical intensity of the user interface object was zero before it appeared and increased when it appeared.
- 10.7 The board tends to disagree with this interpretation, in particular because claim 1 also requires that the "transitioning of the optical intensity indicat[e] [...] progress of the gesture input". Any highlighted "element" according to D6, however, would be present at the start of the input gesture and not change during its progress and thus could not, it seems, serve as an indicator of progress.

- 10.8 The board therefore comes to the preliminary conclusion that neither D8 nor D6 discloses or suggests that a user interface element could appear at the start of the gesture input and increase in optical intensity so as to provide feedback about its progress.
11. The board tends to agree with the decision that the skilled person would have addressed the problem of providing feedback about the input gesture required by D8.
- 11.1 It will have to be discussed whether indicating to users that they are making progress when inputting a required gesture solves a technical problem. Presently, the board tends to consider that this is the case, because such an indication relates to the internal state of a user interface handler and simplifies the interaction with the device.
- 11.2 On that assumption, any "specific manner" which can be said to contribute to the indicating of progress of the input gesture must be taken into account when assessing inventive step. This would appear to follow from the established case law based on the COMVIK decision T 641/00 (see in particular headnote I).
12. The board is presently not convinced, however, that the claimed features actually contribute to the solution of this problem.
- 12.1 Firstly, the claims do not indicate the size of the screen or the user-interface objects in question, or their location relative to where the user has chosen (or had to) input its input gesture. Therefore, it seems that users may not notice the appearance of the user-interface object and its change in optical intensity or, if they do, may not realise that the user-interface object has to do with the input gesture.

- 12.2 Secondly, the change in "optical intensity" is disclosed as having a very broad meaning. The change need not be smooth and the optical intensity may be any visual separation between the user interface object and the background based on colour (see paragraphs 85-87). This seems to subsume the option of displaying the user interface object in a few different colours during the input gesture, and at least the independent claims of the main request and auxiliary request 1 do not seem to exclude this.
- 12.3 For both reasons, it would appear possible that the user may not perceive the claimed features as "indicating progress" of the gesture input.
13. In summary, the board comes to the following preliminary conclusion.
- 13.1 In order to solve the problem proposed by the examining division (see point 11 above), the skilled person would, in the board's view, incorporate the slider toggle of D6 into the interface of D8 without exercising an inventive step.
- 13.2 As just explained, features (a), (c) and (d) appear not to contribute to the "indication of progress", but to be merely accidental and/or of only aesthetic value, and thus insufficient for establishing inventive step.
14. For the time being, therefore, the board takes the view that none of the claims complies with the requirement of Article 56 EPC vis-à-vis documents D8 and D6.

The appellant's attention is, in particular, drawn to Articles 13(1) and 15(3) RPBA. Any amendments to its case should be submitted at the latest one month before the appointed date. Should the appellant decide that it will not attend the oral proceedings, it is invited not only to indicate

its absence to the board but, at the same time, to withdraw its request for oral proceedings. If the appellant is to be absent from the oral proceedings, then the board may cancel them.