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Dear Sirs

**Appeal case T2630/17-3.5.06**  
**European Patent Application No. 10194359.5**  
**Unlocking A Device By Performing Gestures On An Unlock Image**  
**Apple Inc.**

This is a response to the communication of the Board of Appeal pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal dated 12 October 2018. The following submissions are provided ahead of the oral proceedings scheduled for 28 May 2019.

We enclose six complete sets of revised claims as a main request and first to fifth auxiliary requests respectively, intended to replace the claims currently on file. A reference copy of each set of claims is also enclosed, on which amendments with respect to the claims currently on file are indicated.

The main, first auxiliary and second auxiliary requests are amended versions of those requests currently on file. The third to fifth auxiliary requests are newly added. All of the amendments introduced in these requests are occasioned by the Board's comments in the communication, and so we submit the amendments are admissible.

Any amendment is not to be construed as an abandonment of subject-matter.

## **1. MAIN REQUEST**

### **1.1 Amendments and basis**

Independent claims 1, 5, and 9 have been amended to specify that the at least one user interface object is associated with the second user-interface state. Basis for this amendment may be found for example in original claim 1 and paragraph [0082] of the description as filed.

### **1.2 Added matter (Article 123(2) EPC)**

The Board objected that the independent claims of the main request add matter, as they specify that the user interface object "appear[s] and increas[es] in optical intensity". The Board noted that the term "appear" occurred in the originally filed independent claims with the limitation that the user interface object is "associated with the second user-interface state". The independent claims have been amended to restore this limitation.

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The Board also suggested that the term "appear" is only discussed in the description in paragraph [0092] in relation to a telephony application. However, paragraph [0085] describes the user interface object initially not being displayed at all, and then increasing in optical intensity to a maximum optical intensity. This requires the user interface object appears, and then increases in optical intensity. Paragraph [0085], which is not linked specifically to a telephony application, therefore provides further basis for the term "appear" in the independent claims.

We therefore submit that the revised independent claims overcome the Board's added matter objections.

### **1.3 Clarity (Article 84 EPC)**

In section 5.1 of the communication, the Board questioned whether the term "user-interface state", as used in the claims, is clear. The Board suggested that "two user-interface states might differ in as little as the value of a Boolean variable or the value of a counter".

The claims must be read through the eyes of a skilled person, seeking to arrive at an interpretation that is technically meaningful. The skilled person would be familiar with the term "user-interface state" from their common general knowledge. A user-interface state can be generally considered to be an operational mode of a user interface. A different user-interface state provides a different operational mode, for example allowing different user interactions with the user interface. Thus the skilled person would comprehend the term "user-interface state" even in isolation.

However, the context of the independent claims, when read as a whole, provide further clarity to the term "user-interface state". The claims define a method in which a device transitions from a first user-interface state to a second user-interface state upon detection of a completed gesture input. User interface objects associated with the second user-interface state appear during the transition. Thus the first user-interface state is one in which those user interface objects are not displayed, and cannot be interacted with by the user. From this context the meaning of a user-interface state is clear.

The Board further suggested that "it is not clear whether the user interface is functionally different in the two states. As a consequence, the effect of the completed gesture input is unclear and can...not be taken into account in the assessment of inventive step". However, the claims define user interface objects associated with the second user-interface state which are not displayed in the first user-interface state. These user interface objects, at least, provide a functional difference between the two states, and so provide a clear effect of the completed gesture.

In section 5.3 of the communication, the Board questioned "what it means for the change in optical intensity to "indicate" the progress". The Board alleged that the verb "indicates" makes reference to the user's perception of the change. This is not the case. The feature of the changing optical intensity "indicating process of the gesture" means that there is a relationship between the level of optical intensity and the progress; the user doesn't need to perceive it for this relationship to be there. We submit therefore that this feature is clear, and unrelated to the user's perception.

### **1.4 Inventive step (Article 56 EPC)**

The Board indicated that neither D8 nor D6 disclose or suggest that a user interface object could appear at the start of the gesture input and increase in optical intensity so as to provide feedback about its progress, as provided by the present independent claims.

The Board further indicated that indicating to users that they are making progress with inputting a required gesture solves a technical problem, and that "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".

However, the Board alleged that the features of the present claims do not actually contribute to the solution of the technical problem.

In particular, the Board argued that as "the claims do not indicate the size of the screen or the user-interface objects...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 gesture input".

As noted above, the claims must be read so as to be technically meaningful. A claim defining a user interface object which appears and increases in optical intensity to indicate progress of a user's gesture input, as in the present case, must be read as meaning that the user interface object is noticeable to the user. Indeed, as the purpose of a user interface is to interact with a user, a user interface object in general should be read as being noticeable to the user. The Board's suggested interpretation of a user interface object so small as to be unnoticeable appears to be a reduction to the absurd, not a technically meaningful reading of the claims.

On the question of whether a user would "realise that the user-interface object has to do with input gesture", we note that a technical effect need only be credibly achieved. A user interacting with an electronic device according to the present invention would notice a user interface object appearing and changing in intensity at the same time as the user performed a gesture. We submit that it is entirely credible that the user would recognise a relationship between the changing optical intensity and their gesture, and therefore would be guided in continued interaction with the machine. The effect of indicating progress of an input gesture would therefore be achieved by the features of the independent claims.

The Board further suggested that the change in "optical intensity" may mean that "a few different colours" are displayed during the input gesture. The Board appears to suggest that this would prevent the user perceiving the change in optical intensity as indicating progress. Again, however, the technical effect of guiding human-machine interaction by indicating gesture progress need only be credibly achieved. If a user was presented with a user interface object which appeared and then changed colour at the same time as they performed a gesture, it is credible that they would realise that there was a link between the colour of the user interface object and their gesture. In this way the user interface object would indicate that progress towards the completion of the gesture is being made, and so the technical effect is achieved.

Therefore we submit that the features of the independent claims do contribute to indicating progress of the input gesture. As these features are not disclosed or suggested by the prior art, the independent claims are inventive.

## **2. FIRST AUXILIARY REQUEST**

### **2.1 Amendments and basis**

The independent claims of the first auxiliary request have been amended similarly to those of the main request.

### **2.2 Added matter (Article 123 EPC)**

The comments in section 1.2 above in relation to the main request apply equally to the claims of the first auxiliary request.

### **2.3 Clarity (Article 84 EPC)**

The comments in section 1.3 above in relation to the main request apply equally to the claims of the first auxiliary request.

Furthermore, the Board argued that the requirement in the independent claims of the first auxiliary request that the user may interact with the user interface objects "when the device is in the second user interface state" does not exclude the possibility of the user interacting with them in the first user interface state. However, reading the claims to be technically meaningful, it would be clear to the skilled person that the fact the claim explicitly specifies the user can interact with the user interface object in the second user-interface state, but makes no mention of interaction in the first user-interface state, means that the user cannot interact with the objects in the first user-interface state. Moreover, the claim specifies that the user interface objects are not displayed until progress towards completion of the gesture input is detected. Thus there is a clear distinction in the claims between the first user-interface state and the second user-interface state.

## **2.4 Inventive step (Article 56 EPC)**

The comments in section 1.4 above in relation to the main request apply equally to the claims of the first auxiliary request.

Furthermore, the independent claims of the first auxiliary request explicitly state that the user interface object is an interactive object with which the user may interact. If the user may interact with the user interface object, it must be noticeable to the user. This provides further evidence that the Board's interpretation in paragraph 12.1 of the communication, that the user interface object could be unnoticeable by the user, is not correct.

The independent claims of the first auxiliary request therefore credibly contribute to solving the problem of guiding continued human-machine interaction, by indicating the progress of a user's gesture input. Additionally, the claims provide a user interface object which appears during a transition to the second user-interface state, in which the user can interact with the object. The user is therefore presented with the user interface object before they can interact with the object, and so can see the position of the object earlier than if it just appeared after completion of the gesture, allowing the user to interact with the object more efficiently. This guides continued, efficient, human-machine interaction and so furthers the technical effect of guiding human-machine interactions.

## **3. SECOND AUXILIARY REQUEST**

### **3.1 Amendments and basis**

The independent claims of the second auxiliary request have been amended similarly to those of the main request.

### **3.2 Added matter (Article 123 EPC)**

The comments in section 1.2 above in relation to the main request apply equally to the claims of the second auxiliary request.

### **3.3 Clarity (Article 84 EPC)**

The comments in section 1.3 above in relation to the main request apply equally to the claims of the second auxiliary request.

### **3.4 Inventive step (Article 56 EPC)**

The comments in section 1.4 above in relation to the main request apply equally to the claims of the second auxiliary request.

## **4. THIRD AUXILIARY REQUEST**

### **4.1 Amendments and basis**

The independent claims of the third auxiliary request have been amended similarly to those of the main request.

Compared to the claims of the main request, the claims of the third auxiliary request have additionally been amended to include indicating progress of the gesture input by transitioning the optical intensity of the user interface object in accordance with progress towards completion of the gesture input. Basis for this amendment may be found in paragraphs [0087]-[0088] of the description as filed.

### **4.2 Added matter (Article 123 EPC)**

The comments in section 1.2 above in relation to the main request apply equally to the claims of the third auxiliary request.

### **4.3 Clarity (Article 84 EPC)**

The comments in section 1.3 above in relation to the main request apply equally to the claims of the third auxiliary request.

Additionally, in relation the Board's comments in paragraph 5.3 that it is not clear what "indicate" progress of the gesture means, the independent claims of the third auxiliary request have been amended to specify transitioning the optical intensity in accordance with progress towards completion of the gesture input. This amendment emphasises the relationship between gesture completion and change in optical intensity, reinforcing the interpretation that the verb "indicates" relates to this relationship; not to a user's perception as suggested by the Board.

### **4.4 Inventive step (Article 56 EPC)**

The comments in section 1.4 above in relation to the main request apply equally to the claims of the third auxiliary request.

## **5. FOURTH AUXILIARY REQUEST**

### **5.1 Amendments and basis**

The independent claims of the fourth auxiliary request have been amended similarly to those of the main request.

Compared to the claims of the main request, the claims of the fourth auxiliary request have additionally been amended to specify that the first and second user-interface states are ones in which the electronic device responds in a first/second predefined manner to user input. Basis for this amendment may be found for example in paragraph [0048].

### **5.2 Added matter (Article 123 EPC)**

The comments in section 1.2 above in relation to the main request apply equally to the claims of the fourth auxiliary request.

### **5.3 Clarity (Article 84 EPC)**

The comments in section 1.3 above in relation to the main request apply equally to the claims of the fourth auxiliary request.

Additionally, in relation the Board's comments in paragraph 5.1 that the term "user-interface state" is not clear, the independent claims of the fourth auxiliary request have been amended to clarify that the device responds in a first predefined manner to user input in the first user-interface state. The device responds in a second predefined manner to user input in the second user-interface state. Thus the user-interface states cannot differ simply by a value of a counter, as the Board suggests. Instead, the user-interface states must be interpreted as different operational modes of the user interface; and the effect of completing the gesture to transition between the two states provides a clear technical effect.

#### **5.4 Inventive step (Article 56 EPC)**

The comments in section 1.4 above in relation to the main request apply equally to the claims of the fourth auxiliary request.

### **6. FIFTH AUXILIARY REQUEST**

#### **6.1 Amendments and basis**

The independent claims of the fifth auxiliary request have been amended similarly to those of the main request.

Compared to the claims of the main request, the claims of the fifth auxiliary request have additionally been amended to specify that the second user-interface state includes one or more user interface objects that are not included in the first user-interface state. Basis for this amendment may be found for example in paragraph [0082].

#### **6.2 Added matter (Article 123 EPC)**

The comments in section 1.2 above in relation to the main request apply equally to the claims of the fifth auxiliary request.

#### **6.3 Clarity (Article 84 EPC)**

The comments in section 1.3 above in relation to the main request apply equally to the claims of the fifth auxiliary request.

Additionally, in relation the Board's comments in paragraph 5.1 that the term "user-interface state" is not clear, the independent claims of the fifth auxiliary request have been amended to clarify that the second user-interface state includes one or more user interface objects that are not included in the first user-interface state. This reinforces the fact that there is a functional change in the transition from the first user-interface state to the second user-interface state; not merely a change in the value of a counter, as the Board suggests. The effect of completing the gesture to transition between the two states provides a clear technical effect.

#### **6.4 Inventive step (Article 56 EPC)**

The comments in section 1.4 above in relation to the main request apply equally to the claims of the fifth auxiliary request.

Yours faithfully

**M P Gillard**  
**Professional Representative**  
**WITHERS & ROGERS LLP**