Datasheet for the decision
of 20 March 2018

Case Number: T 1133/14 - 3.5.05
Application Number: 09834534.1
Publication Number: 2372501
Language of the proceedings: EN
Title of invention: INPUT DEVICE

Applicant:
Kyocera Corporation

Headword:
Interrupting application on touch screen/KYOCERA

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:
Catchword:
Case Number: T 1133/14 - 3.5.05

DECISION of Technical Board of Appeal 3.5.05 of 20 March 2018

Appellant: Kyocera Corporation
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(Applicant)

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Decision under appeal: Decision of the Examining Division of the European Patent Office posted on 22 November 2013 refusing European patent application No. 09834534.1 pursuant to Article 97(2) EPC.

Composition of the Board:
Chair: A. Ritzka
Members: P. Cretaine
G. Weiss
Summary of Facts and Submissions

I. This appeal is against the decision of the examining division, posted on 22 November 2013, refusing European patent application No. 09834534.1 on the grounds of lack of clarity (Article 84 EPC) and lack of inventive step (Article 56 EPC) with respect to a main request, and lack of clarity, non-compliance with Article 123(2) EPC, and lack of inventive step (Article 56 EPC) with respect to a first auxiliary request. The inventive step objection against the single independent claim of each request was based on the disclosure of

D1: US 2005/044500 as closest prior

and the common general knowledge as illustrated by

D3b: US 2004/021643,

D5: US 2008/024459 and

D6: GB 2 402 105.

II. Notice of appeal was received on 22 January 2014 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 20 March 2014. The appellant requested that the decision be set aside and that a patent be granted based on claim 1 of the main request or claim 1 of the auxiliary request, both requests filed with the statement setting out the grounds of appeal. Oral proceedings were requested as an auxiliary measure.

III. A summons to oral proceedings was issued on
9 January 2018. In an annex to this summons, issued on 12 January 2018, the board gave its preliminary opinion that the subject-matter of claim 1 of the main and auxiliary requests did not involve an inventive step, having regard to the disclosure of D1 in combination with D5. The board further indicated that an inventive step objection could equally be raised using D3b or D6 instead of D5.

IV. With a letter of reply dated 20 February 2018, the appellant submitted an amended claim 1 of an auxiliary request 2.

V. Oral proceedings were held on 20 March 2018. The appellant requested that the decision under appeal be set aside and that a patent be granted based on claim 1 of the main request or claim 1 of auxiliary request 1 (previous auxiliary request), both requests filed with the statement setting out the grounds of appeal, or on claim 1 of auxiliary request 2 filed with letter dated 20 February 2018. The decision of the board was announced at the end of the oral proceedings.

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

"An input apparatus (10) comprising:

a display unit (32) for displaying an input object;
an input unit (34) overlapping the display unit (32) for receiving a pressure input to the input object displayed on the display unit (32) and for outputting a signal corresponding to a position where such input is detected;
a load detection unit (40) for detecting a pressure load on the input unit (34); and
a control unit (20) for controlling to set a first pressure load threshold for each input object to receive the pressure input when the pressure load detected by the load detection unit (40) reaches or exceeds the first pressure load threshold, characterized in that the control unit (20) controls such that, when a second input object is displayed at a position of a first input object which has been displayed on the display unit (32), a second pressure load threshold is set for the second input object to receive the pressure input when the pressure load detected by the load detection unit (40) reaches or exceeds the second pressure load threshold, wherein the second pressure load threshold is higher than the first pressure load threshold."

Claim 1 of auxiliary request 1 reads as follows:

"An input apparatus (10) comprising:
a display unit (32) for displaying an object;
an input unit (34) overlapping the front face of the display unit (32) for receiving a pressure input to the object displayed on the display unit (32) and for outputting a signal corresponding to a position where such input is detected;
a load detection unit (40) for detecting a pressure load on the input unit (34); and
a control unit (20) for controlling to receive the pressure input when the pressure load detected by the load detection unit (40) reaches or exceeds a pressure load threshold, characterized in that the control unit (20) controls such that a pressure load threshold for receiving an input to an interrupting object which is displayed at the same position as a first object is higher than a pressure
load threshold for receiving an input to the first object."

Claim 1 of auxiliary request 2 adds the wording "the first object is displayed based on operation by an application and the second object is an interrupting object that is displayed based on activation of another application while the first object is being displayed" at the end of claim 1 of the main request.

**Reasons for the Decision**

1. The appeal is admissible.

2. Main request

2.1 D1 represents the closest prior art to the subject-matter of claim 1. It discloses a Graphical User Interface (GUI), in particular for mobile phones having a touch screen. A user is able to select an object displayed on the GUI and to activate its associated function by applying a touch having a pressure above a predetermined pressure load threshold at the position of the displayed object (see paragraphs [0040] and [0046]). D1 therefore discloses all the features of the preamble of claim 1.

D1 further describes in paragraphs [0097] to [0105] in relation to Figures 9A to 9D and 13 how the GUI handles an interrupting object, the key "Agent" 328 in Figure 9B, which is displayed at the same position as a previously first displayed object, the key "MenuB" in Figure 9A. A touch on the key "Agent" 328 having a pressure above the predetermined pressure load threshold will activate an agent setting mode of the
GUI (see Figure 9C). D1 further mentions that, if the user does not select it, the interrupting object "Agent" 328 is automatically removed after a predetermined period of time (see paragraph [0102]).

The difference between the subject-matter of claim 1 and the disclosure of D1 is thus that the input apparatus is controlled such that a second pressure load threshold is set up for the second displayed object which is higher than the first pressure load threshold set up for the first displayed object.

The technical effect of this difference is that the function associated with the second displayed object may be activated by the user only if the pressure load is above the higher, second threshold. The user is thereby prevented from unintentionally activating the second input object by applying a "normal" pressure load above the first threshold only, when the second input object suddenly replaces the first input object on which he wanted to press.

The objective technical problem, starting from D1, can thus be formulated as how to handle an interrupting object which intercepts an input intended for the original object.

The skilled person, starting from D1 and trying to solve this problem, will look for prior art touch screen control systems dealing with protection against inadvertent activation of objects. Among such prior art documents, the skilled person would consult D5. D5 discloses a touch screen adapted to detect several pressure thresholds for avoiding accidental activation of certain GUI objects (see paragraphs [0118] to [0120]...
and Figure 11), only the highest of the pressure thresholds being able to control the activation of such an object. The skilled person would obviously consider to follow this teaching and assign to an intercepting object in D1 a second, higher pressure threshold, in order to avoid its accidental activation, thereby arriving at the subject-matter of claim 1.

2.2 The appellant first disputed that D1 disclosed a touch panel that is able to determine whether the pressure load satisfies a particular pressure load threshold, let alone to distinguish between pressure loads satisfying different pressure load thresholds. The board however holds that an object displayed on the standard touch panel of D1 can be activated by the user applying a pressure on the displayed object. It is implicit that the pressure load exercised by the user should be above a set threshold in order for the touch panel to accept it as a user's input. Further, the argumentation of the board in point 2.1 above does not rely on the fact that several pressure load thresholds are foreseen within the touch panel control of D1, but rather that the touch panel of D1 could and would be adapted by implementing such a functionality.

The appellant further argued that the touch "Agent" 328 in D1 did not represent an interrupting object, because its activation led only to the presentation of other options, namely the display of the touches "Goodbye" 325, "Menu", and "Continue" 328 shown in Figures 9C and 9D, rather than causing any action such as accepting a call or opening a link. The board is, however, not convinced by this argument, since the "Agent" touch 328 is displayed at the position of the previously first displayed touch "MenuB", so that a user desiring to activate the touch "MenuB" can involuntarily activate
the "Agent" touch 328 when this touch suddenly replaces the touch "MenuB" on the display screen. This corresponds to the definition of an interrupting object given in the present application. Therefore, contrary to what the appellant argued, the skilled person would not be prevented by the teaching of D1 itself to find a solution to the above-mentioned objective technical problem related to an interrupting object.

Furthermore, the appellant argued that D5 did not deal with the handling of an interrupting object intercepting a touch destined for a first object, but rather to the use of two thresholds for the same displayed object. As a consequence, the skilled person would not be incited to combine the teaching of D5 with that of D1. In the board's view, however, the objective technical problem, as formulated in point 2.1 above, clearly points to avoiding the interception by the interrupting objet of a user input which is not intended for it. In other words, the skilled person will try to avoid that a user touch, having the necessary pressure load to activate an object in D1, activates the displayed interrupting object. The skilled person will thus not be limited to searching for a solution to the problem in prior art documents dealing with interrupting objects per se, but will search more generally in prior art documents dealing with the avoidance of a non-intended activation of an object by a user, such as D5, for instance.

2.3 For these reasons, the board judges that the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC), having regard to the disclosure of D1 in combination with D5.

3. Auxiliary request 1
Claim 1 differs from the subject-matter of claim 1 of the main request only in that a different wording is used for defining the feature of having two different pressure load thresholds for the displayed interrupting object and the previously displayed first object. The subject-matter of claim 1 therefore does not differ in substance from the subject-matter of claim 1 of the main request, as also reflected by the appellant's argumentation with respect to the auxiliary request 1 (see the statement setting out the grounds of appeal, the passage bridging pages 4 and 5).

For the same reasons as given in point 2 above in respect of the main request, the board judges that the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC), having regard to the disclosure of D1 in combination with D5.

4. Auxiliary request 2

Claim 1 differs in substance from claim 1 of the main request in that the interrupting object is further defined as being displayed based on activation of a different application than the application which has led to the display of the first object.

This feature is, however, already known from D1, wherein the interrupting object (Figure 9B, "Agent" 328) is displayed based on activation of an e-mail application, whereas the first object (Figure 9B, "MenuB") was obviously activated by a different application.

For these reasons, the board judges that the subject-matter of claim 1 does not involve an inventive step
(Article 56 EPC), having regard to the disclosure of D1 in combination with D5.

5. Conclusion

Neither of the appellant's three requests is allowable under Article 56 EPC.
Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:  

The Chair:

K. Götz-Wein  
A. Ritzka

Decision electronically authenticated