

Trial decision

Appeal No. 2015- 8097

Kyoto, Japan

Appellant

KYOCERA CORPORATION

Tokyo, Japan

Patent Attorney

SUGIMURA, Kenji

The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2013-522424, entitled "PORTABLE ELECTRONIC DEVICE" (International publication published on January 3, 2013, International publication No. WO2013-001779) has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

1. History of the procedures

The application was originally filed on June 25, 2012 as an International Patent Application (Priority Date: June 27, 2011), a notice of reasons for refusal was issued on June 16, 2014, an examiner's decision of refusal was issued on January 27, 2015, and an appeal against the examiner's decision of refusal was made on April 30, 2015.

2. The Invention

The invention relating to Claim 1 (hereinafter referred to as "the Invention") is as follows as described in Claim 1 of the initial application.

"[Claim 1]

A portable electronic device including:

a display unit that displays a plurality of objects;

a contact detection unit that detects contact at positions corresponding to the objects displayed on the display unit;

a pressure detection unit that detects pressure due to contact on the contact detection unit;

and a control unit that executes processing associated with an object displayed on the display unit when the contact detection unit detects contact at a position corresponding to the object and data based on the pressure detected by the pressure detection unit satisfy a predetermined standard,

the control unit executing control so that the predetermined standard differs among display areas of the display unit on which the objects are displayed."

3. Cited invention

Japanese Unexamined Patent Application Publication No. 2006-146936 (hereinafter referred to as "Cited document") cited in the reasons for refusal of the

examiner's decision describes as follows.

"[Detailed description of the invention]

[Technical field]

[0001]

The invention relates to an input method of managing stylus-based input versus non-stylus-based input to a touch-sensitive device, and in particular to an input method of reducing the effect of unintentional non-stylus-based input to a touch-sensitive device.

[Background]

[0002]

Touch-sensitive surfaces are rapidly becoming more common in computing devices. They are very convenient, as they allow a user to make natural gestures familiar to the user in other contexts, such as by entering handwriting using a stylus. Many of these devices also allow provision of input by non-stylus objects, such as a user's fingertip. The term touch-sensitive surface or device will be used herein to refer to such surfaces or devices that are configured to detect the touch of a stylus and/or a non-stylus object. While generally a convenient feature, a disadvantage to this dual sensitivity to both a stylus and a non-stylus object such as the user's finger is that it is likely that the user will, from time to time, unintentionally touch the touch-sensitive surface with the user's finger, hand, etc., while handling the device or writing on the device using a stylus. For example, while using the stylus to write, the user may rest his or her hand on the touch-sensitive surface, and/or brush the hand against the surface. This may also happen while the user is holding or otherwise handling the device.

[Disclosure of the invention]

[Problem to be solved by the invention]

[0003]

There is therefore a need to address this problem inherent to touch-sensitive devices sensitive to both stylus-based input and non-stylus-based input.

[0004]

The invention has been made in view of the above problem, and is for the purpose of providing an input method of managing stylus-based input versus non-stylus-based input to a touch-sensitive device.

[Means for solving the problem]

[0005]

The invention addresses the above problem by reducing the number of false positive touch inputs made by a non-stylus object such as the user's finger or hand. When the stylus is located proximate to the touch-sensitive surface, the sensitivity and/or responsiveness of the surface to non-stylus input is disabled, reduced, or otherwise modified. For example, non-stylus inputs may be ignored while the stylus is within a proximity zone defined near the touch-sensitive surface. As another example, the threshold size, pressure, capacitance, and/or shape required for a non-stylus input to be successfully accepted may depend upon whether the stylus is within or outside the proximity zone. This aspect of the invention may further be generalized to operate with other input methods. For example, the opposite may be true such that, in certain situations, it may be appropriate to ignore stylus inputs while a non-stylus object is within the proximity zone. Thus, throughout this disclosure the concept of a stylus and a non-stylus object may be reversed and still remain within the scope of this invention.

Or, another type of input, such as a voice input to a microphone, may cause a stylus input or a non-stylus input to be ignored.

[0006]

Furthermore, the invention relates to adjusting the threshold requirements of a non-stylus input depending upon where on the touch-sensitive surface the input is made. For example, non-stylus inputs made on or near a user-selectable displayed object, such as a displayed button, may be easier to make (i.e., have lower threshold requirements) than such inputs made in an area away from any displayed object. Or, for example, a non-stylus input made in an area where it is not expected, such as a defined inking area, is more likely to be interpreted as an unintentional touch and therefore more likely to be ignored.

[0007]

Still furthermore, the invention relates to calibrating various sensitivity thresholds for non-stylus input, as well as the size and/or shape of the proximity zone.

[0008]

Various forms of the invention will be apparent upon consideration of the following detailed description of illustrative embodiments.

... (omitted) ...

[The best mode for achieving the invention]

[0010]

Illustrative embodiments of the invention are explained with reference to drawings, as follows.

[0011]

<Illustrative computing environment>

... (omitted) ...

[0017]

As discussed, the touch-sensitive device 156 may be a device separate from or part of and integrated with the computer 100. In addition, any or all of the features, subsystems, and functions discussed in connection with FIG. 1 may be included in, coupled to, or embodied integrally as part of a tablet-style computer. For example, the computer 100 may be configured as a tablet-style computer where the touch-sensitive device 156 is the main user interface. Such a configuration is referred to in FIGS. 2, 3, 4, and 6, indicating that the device shown there may be considered both the computer 100 and the touch-sensitive device 165. Tablet-style computers are well-known. Tablet-style computers interpret gestures input to the touch-sensitive device 165 using the stylus 166 in order to manipulate data, enter text, create drawings, and/or execute conventional computer application tasks such as spreadsheets, word processing programs, and the like. Input may be made not only by the stylus 166, but also by other non-stylus objects such as a human finger or a non-stylus object held by a user.

... (omitted) ...

[0047]

<Interaction area>

Non-stylus user input may further be ignored and/or specially filtered based on other factors, such as the location of such input on the touch-sensitive surface 205.

[0048]

FIG. 9 is a perspective view of the touch-sensitive device of FIG. 2 showing various interaction areas in accordance with aspects of the present invention. Referring to FIG.

9, the touch-sensitive device 165 may be integrated with a display, such that a user interface appears to be displayed on the touch-sensitive surface 205. The touch-sensitive surface/display 205 may display one or more controls or other objects such as a button 901, a scroll bar, a drop-down menu, a window, etc. Some of these objects may be user-interactable such that the user may select, drag, open, etc., these objects by making gestures with the stylus 166 and/or a non-stylus object. It may be desirable to differentiate the amount of pressure, shape, size, and/or other properties needed to make a non-stylus input over an object as compared with an area where no object is displayed. For example, it may be desirable to require less pressure in a non-stylus input over an object than over an area having no objects. As an example, the threshold pressure required to successfully make a non-stylus input 902 over the button 901 may be less than or greater than the threshold pressure required to successfully make a non-stylus input 903 in an area where no objects exist. Also, the threshold size required to successfully make a non-stylus input 902 over the button 901 may be less than or greater than the threshold size required to successfully make a non-stylus input 903 in an area where no objects exist.

[0049]

In addition, the touch-sensitive surface/display 205 may be subdivided into a plurality of areas 905, 906, 907, where the threshold properties required to make a successful non-stylus input may be different from area to area. For example, a non-stylus input 904 made in the area 905 may require less or more pressure or size than if the non-stylus input were made in area 906."

From the above description in Cited document, in light of drawings of Cited document and technical common sense, the following are recognized.

(1) As described in [0048], FIG. 9 in Cited document is a perspective view of the touch-sensitive device shown in FIG. 2. As described in [0017], FIG. 2 illustrates a tablet-style computer formed by integrating the touch-sensitive device 156 with the computer 100.

Thus, FIG. 9 also illustrates the tablet-style computer formed by integrating the touch-sensitive device 156 with the computer 100.

(2) As described in [0048], the "tablet-style computer" includes "a touch-sensitive surface/display 205 for displaying one or more controls or other objects such as a button 901, a scroll bar, a drop-down menu, a window, etc."

(3) According to the description in [0048], the "button 901, the scroll bar, the drop-down menu, the window, etc." can be recognized as "an object displayed on the touch-sensitive surface/display 205 so that related processing may be executed when contact at a corresponding position and pressure satisfying a predetermined standard due to the contact are detected". The "tablet-style computer", of course, includes a portion which can be recognized as "a contact detection unit that detects contact at positions corresponding to the objects displayed on the touch-sensitive surface/display 205", a portion recognized as "a pressure detection unit that detects pressure due to contact on the contact detection unit", and a portion recognized as "a control unit that executes processing associated with an object displayed on the touch-sensitive surface/display 205 when the contact detection unit detects contact at a position corresponding to the object and data based on the pressure detected by the pressure detection unit satisfy a predetermined standard".

(4) According to the description in [0049], the "control unit" has a function of "executing control so that the predetermined standard differs among display regions of the touch-sensitive surface/display 205".

In light of all the above, it can be said that Cited document describes the following invention (hereinafter referred to as "Cited invention").

"a tablet-style computer including:

- a touch-sensitive surface/display 205 for displaying one or more controls or other objects such as a button 901, a scroll bar, a drop-down menu, a window, etc.";

- a contact detection unit that detects contact at positions corresponding to the objects displayed on the touch-sensitive surface/display 205;

- a pressure detection unit that detects pressure due to contact on the contact detection unit;

- and a control unit that executes processing associated with an object displayed on the touch-sensitive surface/display 205 when the contact detection unit detects contact at a position corresponding to the object and data based on the pressure detected by the pressure detection unit satisfy a predetermined standard,

the control unit executing control so that the predetermined standard differs among display regions of the touch-sensitive surface/display 205."

4. Comparison

In comparison of the Invention and Cited Invention, the following are recognized.

(1) The "tablet-style computer" in Cited invention can be recognized as a "portable electronic device" as with the Invention.

(2) "The button 901, the scroll bar, the drop-down menu, the window, etc." in Cited invention correspond to "a plurality of objects" in the Invention. The "touch-sensitive surface/display 205" in Cited invention corresponds to the "display unit that displays objects" in the Invention.

(3) The control section in Cited invention that "executes control so that the predetermined standard differs among display regions of the touch-sensitive surface/display 205" and the control section in the Invention that "executes control so that the predetermined standard differs among display areas of the display unit on which the objects are displayed are common in that the control section "executes control so that the predetermined standard differs among display areas of the display unit".

According to the above, there are the following corresponding and different features between the Invention and Cited invention.

(Corresponding feature)

"The portable electronic device including:

- a display unit that displays a plurality of objects;

- a contact detection unit that detects contact at positions corresponding to the objects displayed on the display unit;

- a pressure detection unit that detects pressure due to contact on the contact detection unit;

- and a control unit that executes processing associated with an object displayed on the display unit when the contact detection unit detects contact at a position

corresponding to the object and data based on the pressure detected by the pressure detection unit satisfy a predetermined standard,

the control unit executing control so that the predetermined standard differs among display areas of the display unit."

(The different feature)

The control unit of the Invention has a function of "executing control so that the predetermined standard differs among display areas of the display unit on which the objects ('an object associated with predetermined processing') are displayed", and the control unit of Cited invention has a function of "executing control so that the predetermined standard differs among display areas (among a plurality of display regions) of the display unit", while "the display areas" do not specify "display areas on which 'the object associated with the predetermined processing' is displayed".

5. Judgment

(1) Regarding the above (The different feature)

In light of the following, a person skilled in the art could have easily conceived of employing the configuration of the Invention relating to the different feature in Cited invention.

A. The "display regions" in Cited invention are represented by the regions 905-907 shown in FIG. 9 of Cited document. FIG. 9 illustrates an example where the "object associated with the predetermined processing" (button 901) is displayed only in the region 906 of the regions 905-907. However, Cited document does not describe that the regions (regions 905, 907) other than the region 906 are regions where the "object associated with the predetermined processing" cannot be displayed.

Paragraph [0048] in Cited document includes the descriptions, "It may be desirable to differentiate the amount of pressure, shape, size, and/or other properties needed to make a non-stylus input over an object as compared with an area where no object is displayed. For example, it may be desirable to require less pressure in a non-stylus input over an object than over an area having no objects. As an example, the threshold pressure required to successfully make a non-stylus input 902 over the button 901 may be less than or greater than the threshold pressure required to successfully make a non-stylus input 903 in an area where no objects exist", which does not describe that the regions 905, 907 other than the region 906 are regions where the "object associated with the predetermined processing" cannot be displayed.

The reason why is that the descriptions do not indicate an essential configuration, as evidenced by the expressions, "may be desirable to..." or "may", or do not presuppose the regions 905-907 described in [0049].

B. In light of the above and the following circumstances: the regions 905 and 907 can detect contact and pressure in Cited document; and it is common that the "object associated with the predetermined processing" can be displayed at the edges of the display unit, such as the regions 905 and 907, in FIG. 9 (it is obvious from the fact that a "scroll bar" or a "tab", which can be a kind of the "object associated with the predetermined processing", is likely to be displayed at the edge of the display unit), it is reasonable that a person skilled in the art coming into contact with Cited document could easily conceive of allowing the "object associated with the predetermined processing" to be displayed also in the regions 905, 907 as well as the region 906 in FIG.

9.

C. In FIG. 9 of Cited document, the fact that a person skilled in the art could easily conceive of allowing the "object associated with the predetermined processing" to be displayed also in the regions 905, 907 as well as the region 906 indicates that the person skilled in the art could easily conceive the idea that "among display regions" in Cited invention corresponds "among display regions on which objects associated with the predetermined processing are displayed". Thus, in Cited invention, the configuration of the Invention relating to the different feature could be easily employed.

(2) Effect of the Invention

The effect of the configuration of the Invention can be predicted by a person skilled in the art as a configuration which has been easily conceived from Cited invention, and cannot serve as grounds for approving an inventive feature of the Invention.

(3) Appellant's allegation

In the written appeal, the appellant alleged, against an examiner's decision whose content is the same as (1) above, that "in Cited invention, the predetermined standard merely differs among regions regardless of the presence of an object, and does not depend on the presence of the object. Cited document does not include a direct description corresponding to the configuration of the Invention or a description indicative thereof. Compared to Cited invention, the Invention has a significant effect of ensuring operations on different objects in display areas on which the objects are displayed", and alleged that the Invention has an inventive feature. However, the allegation cannot be accepted, for the following reasons.

A. As the appellant alleges, in Cited invention, the predetermined standard merely differs among regions regardless of the presence of an object, and does not depend on the presence of the object, and Cited document does not include a direct description corresponding to the configuration of the Invention or a description indicative thereof. However, the allegation does not indicate that the Invention is not the one which could be easily invented on the basis of Cited invention.

The reason why is that the Invention includes a structure configured to be "controlled so that the predetermined standard differs among display areas on which objects are displayed", which has been configured without requiring a design concept or subjective intention that the predetermined standard "differs among regions depending on the presence of an object", such as a structure configured to display the "object associated with the predetermined processing" also in the regions 905, 907 as well as the region 906, in FIG. 9 in Cited document, in the technical scope thereof, naturally. A person skilled in the art could have easily configured the above structure without including descriptions directly indicating the configuration of the Invention in Cited document, as described in (1) above.

B. The structure which could have easily been configured by a person skilled in the art on the basis of Cited invention has the effect of ensuring operations on different objects in display areas on which the objects are displayed, naturally. The effect cannot serve as grounds for approving an inventive feature of the Invention.

(4) Summary

Therefore, the Invention could have been easily invented by a person skilled in the art on the basis of Cited invention.

6. Closing

In view of the above, the Invention would have been provided easily by a person ordinarily skilled in the art according to Cited invention, thus, the appellant should not be granted a patent for the Invention in accordance with the provisions of Article 29(2) of the Patent Act.

The present application should be rejected without examining other claims.

Therefore, the appeal decision shall be made as described in the conclusion.

March 14, 2016

Chief administrative judge: WADA, Shiro

Administrative judge: KOBIKI, Mitsuaki

Administrative judge: INABA, Kazuo