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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte HYUN-JIN KIM, YONG-GOOK PARK,
JI-YEON KWAK, and MIN-KYU PARK

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Appeal 2019-000447
Application 12/357,632
Technology Center 2600

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Before JEAN R. HOMERE, KARA L. SZPONDOWSKI, and
SHARON FENICK, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

DECISION ON APPEAL

I.   STATEMENT OF THE CASE[1]

Pursuant to 35 U.S.C. § 134(a), Appellant[2] appeals from the
Examiner's decision to reject claims 51–74, which constitute all of the
claims pending in this appeal. Appeal Br. 4. Claims 1–50 have been

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[1] We refer to the Specification, filed Jan. 22, 2009 ("Spec."); Final Office
Action, mailed Nov. 27, 2017 ("Final Act."); Appeal Brief, filed May 23,
2018 ("Appeal Br."); Examiner's Answer, mailed Aug. 30, 2018 ("Ans.");
and Reply Brief, filed Oct. 25, 2018 ("Reply Br.").
[2] We use the word "Appellant" to refer to "Applicant" as defined in
37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as
Samsung Electronics Co., Ltd. Appeal Br. 2.

canceled. *Id.* at 13, Claims Appendix. We have jurisdiction under 35 U.S.C. § 6(b)(1). We reverse.

II. CLAIMED SUBJECT MATTER

According to Appellant, the claimed subject matter relates to the implementation of a user interface based on a type of object displayed on a position of a touch screen corresponding to a user command and a pressure intensity with which a user touches the touch screen. . Appeal Br. 2; Spec. ¶ 2; *id.* ¶ 5 (cited at Appeal Br. 2–3). The touch screen displays an object, which a sensing unit senses as the displayed object is approached or touched, and a control unit controls the overall operation of the device, including controlling display unit to change the display based on the sensed user input. *Id.* ¶¶ 6, 57–59 (cited at Appeal Br. 2–3). "[W]hile watching images on the touch screen . . . the user can input user commands by approaching or touching a desired position on the display unit . . . using his or her hand or a device (such as a touch pen)." *Id.* ¶ 57.

The sensor uses a position detector to determine what position of the touch screen is being approached or touched by a user, and a pressure detector to detect the pressure intensity of the touch. *Id.* ¶ 58. The sensor may determine, if the pressure is not detected or is lower than a first reference value, that the user's hand or user's device is approaching the touch screen. *Id.* ¶ 64 (cited at Appeal Br. 2–3). If the sensor determines that the pressure is higher than a first reference value, the determination is made that the user is touching the touch screen; if the pressure is higher than a second reference value, the determination is made that the user is pressing the touch screen. *Id.* Based on the detection of one of the three types of user operations ("approach," "touch," and "pressure") and the location of the

operation, the control unit correspondingly changes the data on the display. *Id.* ¶ 65 (cited at Appeal Br. 2–3).

The specification presents an example of one embodiment of the invention, illustrating the construction of a user interface on an electronic apparatus. *Id.* ¶¶ 49, 66–68. Figure 3A, reproduced below, illustrates the result of the detection of a user's finger approaching a menu A. *Id.* ¶ 66.

FIG. 3A
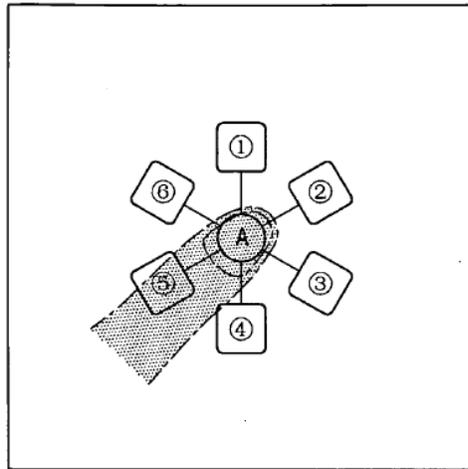
As shown in Figure 3A, when the user's finger is detected approaching menu A, the control unit controls the display unit to display sub-menus 1–6 of menu A at the position approached by the user's hand. *Id.* If the user touches a sub-menu location (in other words, touches the sub-menu location with a pressure higher than a first reference value and lower than a second reference value) that sub menu is selected; this may open an associated user interface, play content associated with the sub-menu, or execute an operation corresponding to an icon. *Id.* ¶ 67 (cited at Appeal Br. 2–3). If the user presses the sub-menu (with a pressure intensity greater than the second

reference value) menu items related to the sub-menu are displayed. *Id.* ¶ 68 (cited at Appeal Br. 2–3). This is shown in Figure 3C, reproduced below, in which a user has pressed sub-menu 2. *Id.*

FIG. 3C
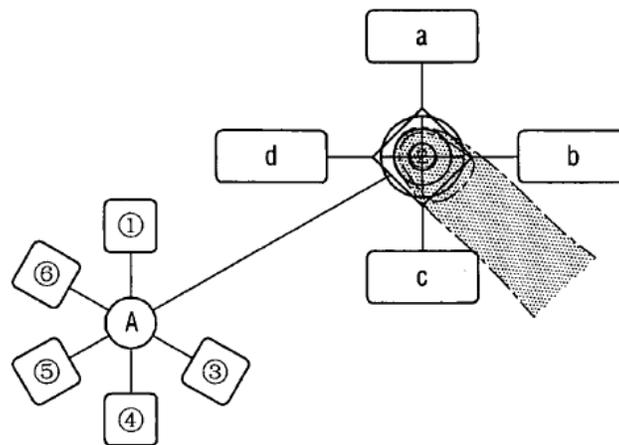
As shown in Figure 3C, in response to the user pressing on sub-menu 2, four new menu items, a through d, are displayed. *Id.* "Menus a, b, c, and d are direct menu items capable of being directly executed according to the situation (for example, comparable to when a right key of a mouse is clicked)." *Id.* Additional embodiments are set forth in the Specification, in which touching an object selects or executes the object functionality. *Id.* ¶¶ 70, 73, 77, 82. In certain of these embodiments, the result of pressing the object (touching at a pressure higher than a second reference value) is described as causing a menu or options for the object to be displayed. *Id.* ¶¶ 74, 75, 78, 83.

Claims 51, 59, and 67 are independent. Claim 51, reproduced below with reference numbers in brackets for reference, is illustrative:

51. An electronic device comprising:
   a display;
   a first sensor;
   a second sensor; and
   a processor configured to:
      control the display to present a plurality of objects,
      control the first sensor to detect a first touch on one of the plurality of objects,
      control the second sensor to detect a level regarding touch pressure of the first touch,
      [i] control the display, if the detected level regarding touch pressure of the first touch on the touched object is greater than a threshold, to present a list of functions related to the touched object at a location associated with the touched object while the touched object is presented, and
      [ii] if the detected level regarding touch pressure of the first touch on the touched object is less than or equal to the threshold, execute a function corresponding to the touched object and control the display to provide information based on the execution,
      [iii] wherein, while the list of functions and the touched object are presented, any of the listed functions may be selected by a second touch having a touch pressure less than or equal to the threshold, the second touch being input on a corresponding selected function, and
      [iv] wherein, while the list of functions and the touched object are presented, the function corresponding to the touched object may be executed by the second touch having a touch pressure less than or equal to the threshold, the second touch being input on the touched object.

Appeal Br. 13, Claims Appendix.

III.   REFERENCES

The Examiner relies upon the following references.

Name	Number	Publ'd/Issued
Rimas-Ribikauskas et al.	US 2006/0132455 A1	June 22, 2006
Hotelling et al.	US 2006/0161870 A1	July 20, 2006
Lee	US 2008/0074399 A1	Mar. 27, 2008
Omiya[3]	WO 2008/001749	Jan. 3, 2008
Tsurata et al. [4]	WO 2008/090902	July 31, 2008

IV.   REJECTIONS

The Examiner rejects claims 51–74 as follows:

Claims 51–74 are rejected under 35 U.S.C. § 112 as failing to comply with the written description requirement. Final Act. 3–5.

Claims 51–74 are rejected under 35 U.S.C. § 112 as failing to comply with the enablement requirement. Final Act. 5.

Claims 51–74 are rejected under 35 U.S.C. § 112 as indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Final Act. 5–6.

Claims 51–57, 59–65, and 67–73 are rejected under 35 U.S.C. § 103 as unpatentable over Rimas-Ribikauskas, Hotelling, Tsurata, and Omiya. Final Act. 7–13.

Claims 58, 66, and 74 are rejected under 35 U.S.C. § 103 as unpatentable over Rimas-Ribikauskas, Hotelling, Tsurata, Omiya, and Lee. Final Act. 13–14.

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[3] Omiya, US 2009/0210821 A1, published Aug. 20, 2009, is relied upon as a translation, and references are to the US publication. Final Act. 7.
[4] Tsurata et al., US 2010/0088634 A1, published April 8, 2010 is relied up on as a translation, and references are to the US publication. Final Act. 7.

V. ANALYSIS[5]

1. *Rejections under 35 USC § 112*

The Examiner rejects claim 51 as not supported by sufficient written description. Final Act. 3–5. The Examiner determines that the Specification does not sufficiently describe the limitation (limitation [iv], or "second wherein clause") in claim 51 reciting that "while the list of functions and the touched object are presented, the function corresponding to the touched object may be executed by the second touch having a touch pressure less than or equal to the threshold, the second touch being input on the touched object." *Id.* The Examiner finds that while there are several embodiments described in the Specification, none discloses the subject matter of limitation [iv]. *Id.* at 4.

According to the Examiner, referring to limitation [i], the Specification describes embodiments in which, when a touch is greater than a threshold, a list of functions related to the touched object is presented. *Id.* (citing Spec. ¶¶ 78, 84, 88, 89, Figs. 3C, 5D, 6D). However, the Examiner finds no disclosure in the Specification regarding a second touch having a pressure less than or equal to the threshold on the touched object. *Id.* at 4–5.

The Examiner additionally finds that, because of the written description issues, the subject matter is not enabled, and the claims are indefinite. *Id.* at 5–6.

Appellant argues that the Specification describes the touching of sub-menus of a menu, as described in paragraphs 66–68, and, in that description,

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[5] We have considered in this Decision only those arguments Appellant actually raised in the Briefs. Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2014).

that limitation [i] (first touch greater than a threshold) is illustrated by Figure
3C, in which touching "sub-menu (2) with a pressure greater than [a]
threshold causes display of related menus (a)–(d)." Appeal Br. 4–5. The
recited "list of functions related to the touched object" is described,
according to Appellant, by the Specification's related menus (a)–(d). *Id.* at
5. The Appellant then contends that the first wherein limitation (limitation
[iii]) is supported by the Specification's description of the selection of one of
the related menus (a)–(d). *Id.* (citing Spec. ¶ 68, which describes that
"[m]enus a, b, c, and d are direct menu items capable of being directly
executed according to the situation.")

  With respect to the second wherein limitation (limitation [iv]),
Appellant argues that the distinction from the first wherein limitation "is
simply the location of the second touch." *Id.* at 5. Appellant contends that
"Appellants' specification has provided many examples in which menus,
icons, etc., may be displayed and once displayed, may be selected and
executed." *Id.* at 6. Appellant argues that the re-selection of an originally
selected object with a second touch would be described in any of these
examples, and that, while the Specification explains that when a sub-menu
(e.g. sub-menu (2)) receives a touch at a pressure above a threshold,
resulting in related menus (a)–(d) being displayed, "this explanation of FIG.
3C should not be interpreted as meaning that sub-menu (2) is no longer
available for selection and execution." "Rather," continues Appellant, "FIG.
3C must be considered and understood in light of the description of FIGS.
3A and 3B." *Id.* at 6–7. Appellants argue that when A and sub-menus (1)–
(6) are displayed as shown in Fig. 3A, "it is apparent that any of the
displayed menu or sub-menus may be selected and touched." *Id.* at 6–7.

Appellant asserts that when the menu A and sub-menus (1)–(6) are displayed (as in Figure 3A) "any of menu A and sub-menus (1)–(6) are . . . selectable." *Id.* at 7. Thus, Appellant argues, in Figure 3C, any of the sub-menu (2) and menus (a)–(d) may be selected. *Id.* at 7–8. Appellants argue that while it is not explicit that an object that has been pressed and now displays a list of associated functions can be executed by a second touch having a touch pressure less than or equal to the threshold, that this is inherent in the Specification. Appeal Br. 8; Reply Br. 3–4. Appellant relies on the same arguments to argue that the there is no lack of enablement or indefiniteness of the claims. Appeal Br. 8.

In order for a claim to satisfy the written description requirement of § 112, the written description "'must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.'" *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir 2010) (en banc) (citing *In re Gosteli*, 872 F.2d 1008, 1012 (Fed. Cir. 1989)). "[T]he test for sufficiency is whether the disclosure of the application relied upon conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Id.*

We agree with Appellant that the written description describes the subject matter claimed in claim 51. The Specification describes that where an object is displayed, the control unit, sensing a touch of the displayed object greater than a threshold, will cause the display of menu items related to that object. Spec. ¶ 14 (describing a "menu" which is pressed with a pressure intensity higher than a reference value, resulting in the display of "a direct menu item of the menu"). The Specification describes that these objects, when touched with a pressure intensity less than that reference

value, are selected. *Id.* ¶ 13 (describing that such a touch would cause the control unit to "select the menu"). The description in the Specification does not describe any limitation as to how the object came to be displayed.

The Specification also describes in at least one embodiment that certain objects may be touched twice, at different intensity levels and different times. For example, the Specification describes that content may be touched, causing playback of the content, and then the content being played back may be pressed, which will cause the display of a control menu regarding playback. *Id.* ¶¶ 16, 18, 36, 38, 73, 75. While this does not explicitly describe the pressing (touch pressure greater than a threshold) followed by the touching (touch pressure less than or equal to a threshold) that is recited in claim 51, it further supports Appellant's contention that one of ordinary skill in the art would have understood the Specification to describe "many examples in which menus, icons, etc. may be displayed, and once displayed, may be selected and executed," and that this does not exclude the selection (with a touch or a press) of an object that had previously been selected (with a touch or a press). Appeal Br. 6–7.

For this reason, we reverse the rejection of claim 51 as having inadequate written description. Claims 59 and 67 are rejected for the same reasons, as are dependent claims 60–66 and 68–74, for the same reason, we reverse the rejection of these claims as well.

The rejections of claims 51–74 as failing to comply with the enablement requirement and as failing to particularly point out and distinctly claim the subject matter regarded as the invention are based on the same findings as the written description rejection (*see* Final Act. 5–6) and we reverse these rejections for the same reason.

2. Obviousness Rejections

The Examiner, in the rejection of claim 51, finds that limitation [iv] is disclosed by the combination of Rimas-Ribikauskas and Omiya. Final Act. 11–12. Specifically, the Examiner finds that Rimas-Ribikauskas discloses "the function corresponding to the touched object may be executed by the second touch having a touch pressure less than or equal to the threshold, the second touch being input on the touched object" but not that this would occur "while the list of functions and the touched object is presented." *Id.* at 11. The Examiner finds that "Omiya discloses that a list of functions continues to be presented until the user clicks somewhere on the screen off the menu, and that this click can launch a process." *Id.* (citing Omiya, Figs. 3, 4).

Omiya is directed to a method for displaying a form for receiving a parameter input when an item is selected from a pop-up menu, to improve usability. Omiya, code (57) ("Abstract"), ¶¶ 4, 5, 7, 9, 58. Omiya describes the display of a pop-up menu with various processing items, and nested additional menus. *Id.* ¶¶ 79–83, Fig. 2. When a processing item is selected which requires parameters, a parameter input form is displayed at the display position of the processing item. *Id.* ¶¶ 84, 85, Fig. 2. When a user inputs data to the parameter input form, the processing is carried out with the entered parameters. *Id.* ¶¶ 86, 87, Fig. 2. In connection with the description of the display of a non-nested pop-up menu, Omiya includes "a drawing depicting a correspondence between operations by a user and processing concerning a pop-up menu." *Id.* ¶ 61.

FIG. 3

OPERATION	POINTER POSITION	PROCESS
RIGHT-CLICK	–	DISPLAY MENU RELATED TO OBJECTS SELECTED AT POINTER POSITION
LEFT-CLICK	ON MENU	CARRY OUT PROCESS (IF PARAMETERS ARE NOT REQUIRED) DISPLAY INPUT FORM (IF PARAMETERS ARE REQUIRED)
	OFF MENU	CLEAR MENU AND CARRY OUT PROCESS ACCORDING TO PARAMETERS

As can be seen in the first row in the table of Figure 3, Omiya describes that when a mouse is right-clicked, a pop-up menu related to objects selected may be displayed, either at the position of the object or at a location separate from the object. *Id.* ¶ 89, Fig. 3. When a pop-up menu is displayed and the mouse is left-clicked on the pop-up menu, the processing item pointed to is carried out, either directly or after a parameter input form is displayed. *Id.* ¶¶ 90–91, Fig. 3. If the pop-up menu is displayed and the mouse is left-clicked outside of the pop-up menu, the pop-up menu is cleared. *Id.* ¶ 92, Fig. 3.

Omiya also includes the state diagram of Figure 4, which shows three states: A, in which no pop-up menu is displayed, B, in which a pop-up menu is displayed, and C, in which pop-up menu and a parameter input form is displayed. *Id.* ¶ 94, Fig. 4. Figure 4, a state diagram representing transitions between these states is reproduced below. *Id.* ¶¶ 62, 93.

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FIG. 4
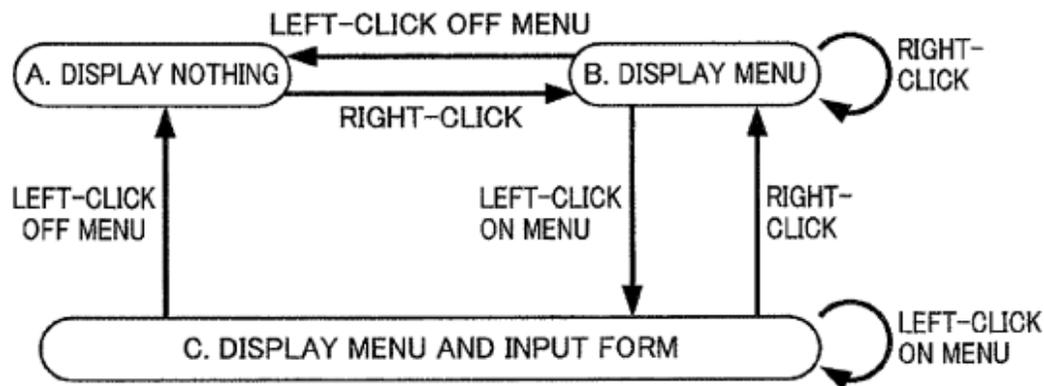
As can be seen from Figure 4, when a pop-up menu is displayed (states B or C), a left click on the pop-up menu causes a parameter input form for a selected processing item to be displayed. *Id.* ¶¶ 96, 97. But in either of those states, a left-click off of the pop-up menu "indicates to finish display of the pop-up menu" and a transition to state A, in which neither pop-up menu nor parameter input form is displayed. *Id.* ¶¶ 98.

Appellant argues that Omiya does not disclose "that when the pop-up menu is displayed, either an item included on the pop[-]up menu or the underlying 'touched object' may be selected." Appeal Br. 11. Rather, according to Appellant, "Omiya only describes that if the touch is anywhere but on an item of the pop-up menu, display of the pop-up menu is finished." *Id.* Appellant argues that to the extent any processing occurs in Omiya when a mouse is left-clicked off of the menu, it relates to parameters that have been entered on a parameter input form. *Id.* at 11–12 (citing Omiya ¶ 92, Fig. 7); Reply Br. 6.

In the Examiner's Answer, the Examiner finds that Omiya's Figure 3 indicates that a left-click off the menu would cause Omiya to "carry out process according to parameters." Answer 18 (quoting Omiya Fig. 3).

Therefore the Examiner finds that in Omiya such a left-click "executes the function – the process – after the list of functions – the menu – has been displayed." *Id.*

We agree with Appellant regarding the teachings of Omiya and limitation [iv]. Omiya specifically describes that the pop-up menu is cleared and the procedure for which an input has been entered is run when the input "indicates a portion of the screen *other than that of the pop-up menu or the form displayed in the display unit*." Omiya ¶ 25; *see id.* ¶¶ 17, 18, 103. The Examiner cites Figure 3 which confirms this – the "carry[ing] out [of] the process according to parameters" in Figure 3 occurs when there is a left click with the pointer position "off menu". *Id.* Fig. 3; *see id.* ¶ 92. The processes with parameters being executed in Omiya, however, are listed on the pop-up menu. *Id.* ¶¶ 84, 85, Fig. 2. Therefore, the click which is "off menu" is not a click on the portion of the display in which the process being executed is displayed.

Limitation [iv] requires that "the function corresponding to the touched object may be executed by the second touch . . ., the second touch being input on the touched object." While the Examiner finds that "Omiya's teaching that a function can be executed after a list of functions is displayed is all that is required to teach the claim language," the Examiner does not explain how Omiya teaches or suggests a second touch on the object with the corresponding function, and, as discussed above, Omiya's click which carries out the process according to parameters is "off menu" and thus not a touch on the process's corresponding processing item, which is displayed on the menu. *See* Omiya ¶¶ 82–87, Fig. 2.

Accordingly, we reverse the § 103 rejection of claim 51, the rejection of independent claims 59 and 67 which contain a similar limitation and are rejected on the same rationale, and the rejection of claims 52–57, 60–65, and 68–73 which depend from these independent claims and for which the Examiner relies in part on the rejection of claim 51. *See* Final Act. 12–13. The rejection of claims 58, 66, and 74 similarly rely on the § 103 rejection of claim 51 and are also reversed. *See id.* at 13–14.

VI. CONCLUSION

For the above reasons, we reverse the Examiner's rejections of claims 51–74.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
51–74	112	written description, enablement, indefiniteness		51–74
51–57, 59–65, and 67–73		Rimas-Ribikauskas, Hotelling, Tsurata, and Omiya		51–57, 59–65, and 67–73
58, 66, and 74	103	Rimas-Ribikauskas, Hotelling, Tsurata, Omiya, and Lee		58, 66, and 74
Overall Outcome				51–74

REVERSED