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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

92045 7590 08/29/2023

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
XAVIER, ANTONIO J	

ART UNIT	PAPER NUMBER
2623	

NOTIFICATION DATE	DELIVERY MODE
08/29/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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APPLICATION NO.	ISSUE DATE	PATENT NO.
17/206,107	29-Aug-2023	11740727

The Caldwell Firm, LLC
PO Box 59655
Dallas, TX 75229

EGRANT NOTIFICATION

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	08/29/2023	11740727	SMITH070AT_1	7030

92045 7590 08/09/2023

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Dallas, TX 75229

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

Michael S Smith, Los Altos, CA;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

P4TENTS1 LLC, Wilmington, DE;

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Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

TITLE OF INVENTION: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	09/26/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
XAVIER, ANTONIO J	2623	345-174000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Patrick E. Caldwell, Esq.
2 The Caldwell Firm, LLC
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: P4TENTS1 LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Wilmington, DE

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

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4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via Patent Center or EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

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5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Patrick Caldwell/ Date 11 Jul 2023

Typed or printed name Patrick Caldwell Registration No. 44,580

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**07/11/2023 10:24:20 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62424477	AUTHORIZED BY	-
CUSTOMER #	92045	FILING DATE	03/18/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Michael S Smith

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0581	**E20237AM26057811**	**Patrick Caldwell**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2501	UTILITY ISSUE FEE	480.00	1	480.00
			TOTAL AMOUNT:	**$480.00**

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If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C.

371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Michael S. Smith Application No.: 17/206,107 File Date: 2021-03-18 Title: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	Confirmation No.: 7030 Examiner: Antonio J XAVIER Art Unit: 2623 Docket No.: SMITH070AT_1 Date: Jul 08, 2023

EXAMINER INTERVIEW

Date of Interview	September 24, 2021
Type of Interview	Email
Name of Participants	Patrick Caldwell, Antonio J XAVIER
Exhibit shown?	Appendix A
Claims Discussed	All Claims
Prior Art Discussed	N/a
Substance of Interview	Sent proposed amendments with Examiner.
Agreement Reached?	The amendments will merit a further search and consideration.

Britten Sessions

From: Patrick E. Caldwell <pcaldwell@thecaldwellfirm.com>
Sent: Friday, September 24, 2021 11:23 AM
To: Antonio.xavier@uspto.gov
Subject: 17/206,107 (SMITH070AT_1) Proposed Amendment
Attachments: SMITH070AT_1_Proposed Amendment_9_24_2021.docx

Examiner Xavier,
Please consider the attached proposed amendment.
--

Thanks,
Patrick

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1.-8. (Cancelled)

9. (New) A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a display and a touch-sensitive surface, cause the electronic device to:

display a first user interface of a first application on the display;

while displaying the first user interface of the first application, detect a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, cease to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detect a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, cease to display the first user interface of the first application and displaying the respective other user interface on the display.

10. (New) The non-transitory computer readable storage medium of claim 9, wherein: the first application is determined to be protected when the first application is operating in one of a plurality of predefined protected modes.

11. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the navigation-gesture criteria are application-switching-gesture criteria; and
the respective other user interface is another application.

12. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the navigation-gesture criteria are control-panel-gesture criteria; and
the respective other user interface is a control panel user interface.

13. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the navigation-gesture criteria are application-switcher-gesture criteria; and
the respective other user interface is an application-switcher user interface.

14. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu of a control panel.

15. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the navigation-gesture criteria are application-switching-gesture criteria; and
the respective other user interface is another application.

16. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the navigation-gesture criteria are control-panel-gesture criteria; and
the respective other user interface is a control panel user interface.

17. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the navigation-gesture criteria are application-switcher-gesture criteria; and
the respective other user interface is an application-switcher user interface.

18. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the first application is also determined to be protected when the first user interface of the first application is displayed via the menu, by the first user interface of the first application being displayed on the menu.

19. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

20. (New) The non-transitory computer readable storage medium of claim 19, wherein:
the navigation-gesture criteria are application-switching-gesture criteria; and
the respective other user interface is another application.

21. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is capable of being protected and at least one other application is not capable of being protected.

22. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application appears in a first manner when protected and appears in a second manner when not protected.

23. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

24. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

25. (New) The non-transitory computer readable storage medium of claim 9, wherein at least one of:

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and not being specific to the first application;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and being specific to the first application;

the first application is protected by one or more constraints;

the second contact on the touch-sensitive surface meets the navigation-gesture criteria;

the determination that the second input is detected is detected within a confirmation time threshold of the first input;

the first application is protected by an operating system;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first user interface of the first application is displayed without displaying any user interface of any other application;

the first user interface of the first application is not displayed without displaying any user interface of any other application;

the first user interface of the first application is displayed with another user interface of another application;

the first contact is detected before detecting the second contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even without forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even before forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

wherein the first application is determined to be protected based on a context in which the first contact is detected;

the one or more navigation-gesture criteria includes a single criteria;

the one or more navigation-gesture criteria includes at least one criteria;

the one or more navigation-gesture criteria includes more than one criteria;

the predefined edge region includes a contact area;

the predefined edge region includes a selection area;

the predefined edge region includes a region near an edge;

the predefined edge region includes a region at an edge;

the predefined edge region includes a region within a predetermined distance from an edge;

the predefined edge region includes a contact area near an edge of the display;

the predefined edge region includes a contact area at an edge of the display;

the predefined edge region includes a contact area within a predetermined distance from an edge of the display;

the predefined edge region includes a contact area near an edge of the touch-sensitive surface;

the predefined edge region includes a contact area at an edge of the touch-sensitive surface;

the predefined edge region includes a contact area within a predetermined distance from an edge of the touch-sensitive surface;

the predefined edge region includes a selection area;

the boundary includes a boundary of a contact area;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of an entirety of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of only a portion of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across an entirety of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across only a portion of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the one or more navigation-gesture criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the first application is subject to the first contact meeting the one or more navigation-gesture criteria, by ceasing to display the first user interface of the first application and displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the first application is not subject to the first contact meeting the one or more navigation-gesture criteria, by not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the while displaying the first user interface of the first application includes at any point in time when the first user interface of the first application is displayed;

the while displaying the first user interface of the first application includes an entire duration in time when the first user interface of the first application is displayed; or

the maintaining display of the first user interface of the first application without displaying the respective other user interface, is the same as not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display.

26. (New) A method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

27. (New) The method of claim 26, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu.

28. (New) The method of claim 26, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

29. (New) The method of claim 26, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

30. (New) The method of claim 26, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

31. (New) The method of claim 26, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

32. (New) The method of claim 31, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

33. (New) The method of claim 26, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

34. (New) The method of claim 33, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

35. (New) The method of claim 34, the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

36. (New) The method of claim 35, wherein the first user interface of the first application appears differently based on whether the first application is protected.

37. (New) An electronic device, comprising:

a display;

a touch-sensitive surface;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**07/11/2023 10:24:20 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62424477	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
SMITH070AT_1_IssueFeeXmtl_vF_11-Jul-2023.pdf	1	Issue Fee Payment (PTO-85B)	126 KB
SMITH070AT_1_ExaminerInterview_20230708.pdf	15	Applicant summary of interview with examiner	725 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
SMITH070AT_1_IssueFeeXmtl_vF_11-Jul-2023.pdf	74546E45F60EEB0860BCC20A67A37EB1BEBEA3C4D9F861AAD95A845CD6AE627C1196CED0AA582825B1E657E3AB860ED9

	3BE94D9BED20A664B1E1F5C7532DEFAA
SMITH070AT_1_ExaminerInterview_20230708.pdf	B8C310C9BEE4EFD76C0A59D03BDE29A6B7C8D94026253497 91B0777424503F21B880722C890772BAB0060FC805FC10912A7 890AC4F4A58069DD5AE1CD6E4323A

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

92045 7590 07/03/2023

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
XAVIER, ANTONIO J	

ART UNIT	PAPER NUMBER
2623	

NOTIFICATION DATE	DELIVERY MODE
07/03/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

caldwelldocketing@gmail.com
eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

CORRECTED ***Notice of Allowability***	**Application No.** 17/206,107	**Applicant(s)** Smith, Michael S	
	Examiner ANTONIO J XAVIER	**Art Unit** 2623	**AIA (FITF) Status** No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 6/9/23.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 27-32,34-47 and 49 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☑ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Antonio Xavier/
Primary Examiner, Art Unit 2623

Applicant-Initiated Interview Summary	**Application No.** 17/206,107	**Applicant(s)** Smith, Michael S		
	Examiner ANTONIO J XAVIER	**Art Unit** 2623	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ANTONIO J XAVIER	Primary Examiner	Telephonic
Patrick E. Caldwell (Reg. No.: 44,580)	Attorney of Record	

Date of Interview: 28 June 2023

Issues Discussed:

Other

Applicant called to discuss an IDS submission dated 6/9/23 that was not considered.
Examiner noted the NOA was sent out for processing on 6/9/23 before the IDS was received.

Examiner agreed to consider the IDS and mail a CORRECTED NOA.
Examiner also confirmed the correct date for NPL item 3 is February 2023 and corrected the IDS submission.

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	1	Apple, "iPhone User Guide" Published 2011	
	2	Apple, "Specifications Apple Newton MessagePad" (1996)	
	3	Documents from Case No. 2:22-cv-00290 *February 2023 /AX/ 06/28/2023	
	4	Edward C. Baig. "Palm Pre: the missing manual®" O'Reilly. Published 2009.	
	5	Georg Apitz and Froncois Guimbretiere, Video Clips, "CrossY: A Crossing-Based Drawing Application." Published July 19, 2006	
	6	Internet Archive, "Best Buy Verizon" Published May 20, 2010	
	7	Internet Archive, "BestBuy Droid Incredible Ad" Published May 20, 2010	
	8	Internet Archive, "BestBuy Droid Incredible Purchase" Published May 20, 2010	
	9	Internet Archive, "It's a DROID. It's Incredible. It's Coming to Verizon Wireless" Published April 18, 2010	
	10	Internet Archive, "Walmart Cart - DROID INCREDIBLE by HTC" Published June 6, 2010	
	11	Internet Archive, "Walmart Cell Phones" Published June 5, 2010	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	12	Internet Archive, Verizon Wireless, "Get The Most Out of Your Droid Incredible BY HTC." Published September 7, 2011.	
	13	Joe Zeff, Macworld, "The iPad arrives: our first look at Apple's revolutionary new tablet" Published April 2010	
	14	Nokia, "Nokia N8-00 Data Sheet" (2010)	
	15	Rick Broida, "How to Do Everything Palm Pre." Published 2009	
	16	Toly K, "HTC Droid Incredible Survival Guide" Published November 17, 2010	
	17	Youtube, Tiger Direct, "HTC Droid Incredible or Verizon Wireless Review" Published June 21, 2010	
	18	Ziegler, "Palm® Pre™ for Dummies." For Dummies. Published 2009	
	19	Karch, Marziah., Made Simple Learning, MSL., Mazo, Gary., Nickinson, Phil., Trautschold, Martin. "Droids Made Simple: For the Droid, Droid X, Droid 2, and Droid 2 Global". Netherlands: Apress, 2011.	
	20	Grace Colby, Laura Scholl, "Transparency and blur as selective cues for complex visual information," Proc. SPIE 1460, Image Handling and Reproduction Systems Integration, (1 August 1991); https://doi.org/10.1117/12.44415	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Antonio Xavier/	Date Considered	06/28/2023

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-09
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

92045 7590 06/26/2023

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
XAVIER, ANTONIO J	
ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 06/26/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

TITLE OF INVENTION: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	09/26/2023

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

92045 7590 06/26/2023

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

TITLE OF INVENTION: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	09/26/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
XAVIER, ANTONIO J	2623	345-174000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1_____
2_____
3_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via Patent Center or EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

92045 7590 06/26/2023

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
XAVIER, ANTONIO J	
ART UNIT	**PAPER NUMBER**
2623	

DATE MAILED: 06/26/2023

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/206,107	Applicant(s) Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 5/25/23.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 27-32,34-47 and 49 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☑ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☑ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☑ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Antonio Xavier/
Primary Examiner, Art Unit 2623

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Patrick E. Caldwell (Reg. No.: 44,580) on June 2, 2023.

The application has been amended as follows:

CLAIMS

27. (Currently Amended) A device, comprising:

at least one non-transitory memory;

a touch screen; and

one or more processors in communication with the at least one non-transitory memory, and the touch screen, wherein the one or more processors execute instructions in the at least one non-transitory memory, to cause the device to:

display an object and at least one other object;

detect at least part of a gesture on the touch screen; and

during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a distance magnitude of the gesture being detected on the touch screen to thereby move the object on the

touch screen, at least a portion of the at least one other object that is not overlapped, such that a magnitude of the blur itself, and not a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude.

28. (Previously Presented) The device of claim 27, wherein the device is configured such that:

the object includes a graphic object;

the object is displayed closer to a top edge of the touch screen than a bottom edge of the touch screen;

an aspect of the object other than a location thereof is modified, based on the change in the distance magnitude of the gesture being detected on the touch screen; and

the at least one other object includes a background image.

29. (Previously Presented) The device of claim 28, wherein the device is configured such that the object is

displayed closer to a right edge of the touch screen than a left edge of the touch screen.

30. (Previously Presented) The device of claim 28, wherein the device is configured such that the at least part of the gesture is detected on the touch screen on the object.

31. (Previously Presented) The device of claim 28, wherein the device is configured such that, during at least a part of at least an initial portion of the change in the distance magnitude, an entirety of the object is blurred.

32. (Previously Presented) The device of claim 28, wherein the device is configured such that, during at least a part at least an initial portion of the change in the distance magnitude, an entirety of a virtual display layer in which the object is displayed, is blurred.

33. (Cancelled)

34. (Previously Presented) The device of claim 28, wherein the device is configured such that the graphic object includes a battery icon.

35. (Previously Presented) The device of claim 28, wherein the device is configured such that the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer.

36. (Previously Presented) The device of claim 28, wherein the device is configured such that the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer that appears in front of the first virtual layer.

37. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object other than the location thereof is modified while the object continues to be displayed, based on the change in the distance magnitude of the gesture being detected on the touch screen.

38. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a size of the object.

39. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a size of the object, and another size of the at least one other object is not modified in addition to the blur, when the size of the object is modified.

40. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a color of the object.

41. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a color of the object, and another color of the at least one other object is not modified in addition to the blur, when the color of the object is modified.

42. (Previously Presented) The device of claim 28, wherein the device is configured such that the at least one object remains displayed to be modified after the completion of the gesture.

43. (Previously Presented) The device of claim 28, wherein the device is configured such that the blur is not caused by any overlap of the at least portion of the at least one other object.

44. (Previously Presented) The device of claim 28, wherein the device is configured such that:

the at least part of the gesture is detected on the touch screen on the object;

during at least a part of an initial change in the distance magnitude, an entirety of the object is blurred; and

the aspect of the object other than the location thereof is modified while the object continues to be displayed, based on the change in the distance magnitude of the gesture being detected on the touch screen on the object.

45. (Currently Amended) The device of claim 44, wherein the device is configured such that:

~~a magnitude of the blur itself, as opposed to a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude;~~

the graphic object includes a battery icon; and

the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer.

46. (Previously Presented) The device of claim 45, wherein the device is configured such that:

the object is displayed closer to a right edge of the touch screen than a left edge of the touch screen; and

the aspect of the object includes a size of the object, and another size of the at least one other object is not modified in addition to the blur, when the size of the object is modified.

47. (Previously Presented) The device of claim 45, wherein the device is configured such that:

the aspect of the object includes a color of the object, and another color of the at least one other object is not modified in addition to the blur, when the color of the object is modified.

48. (Cancelled)

49. (New) The device of claim 47, wherein the device is configured such that at least one of:

the object includes a dynamic object;

the other object includes a background image;

the other object includes an anchor object;

the object includes a dynamic object without a corresponding anchor object;

the gesture includes a move gesture;

the gesture includes a multiple contact gesture;

the gesture does not include a multiple contact gesture;

the blur includes a cue;

the blur is feedback for the gesture;

the blur is feedback for the gesture, and the gesture includes a move gesture;

the blur is feedback for the gesture, and the gesture includes only a move gesture;

the blur is feedback for the gesture, and the gesture includes a move gesture of an anchor and move gesture;

the blur includes a modification;

the touch screen includes a touch interface and a display;

the touch screen is a combination of a touch interface and a display;

the touch screen is on a front face of the device;

the touch screen is on a back face of the device;

based on a change in a distance magnitude of the gesture being detected on the touch screen on the object to thereby move the object on the touch screen, the at least portion of the at least one other object that is not overlapped.

the at least portion of the at least one other object that is not overlapped, is not overlapped by any object including the object;

the at least portion of the at least one other object that is not overlapped;

the one or more processors is in direct communication with the at least one non-transitory memory, and the touch screen;

the one or more processors is in indirect communication with the at least one non-transitory memory, and the touch screen;

the one or more processors is in communication, via at least one bus, with the at least one non-transitory memory, and the touch screen;

the at least one non-transitory memory includes a single memory for storing the instructions;

the at least part of the gesture is detected via the touch screen on the object, by an entirety of the gesture being detected via the touch screen on the object;

the at least part of the gesture is detected via the touch screen on the object, by only the part of the gesture being detected via the touch screen on the object;

the at least part of the gesture is detected via the touch screen on the object, by only an initial part of the gesture being detected via the touch screen on the object;

the at least part of the gesture is mutually exclusive of the at least portion of the gesture;

the at least part of the gesture overlaps, only in part, the at least portion of the gesture;

the at least part of the gesture is at least partially the same as the at least portion of the gesture;

the at least part of the gesture is the same as the at least portion of the gesture;

the gesture includes a combination of a touch gesture component and a swipe gesture component;

the gesture includes solely a swipe gesture;

the gesture includes solely a slide gesture;

the magnitude is detected utilizing one or more of a plurality of contact-sensing technologies including a capacitive-based contact sensing technology, a resistive-based contact sensing technology, an optical-based contact sensing technology, or a surface acoustic wave-based contact sensing technology;

the touch screen is a two-dimensional layered user interface;

the touch screen is a single layer user interface that simulates a three-dimensional layered user interface through use of virtual display layers;

the at least part of the gesture on the touch screen on the object is detected, by being detected on a selection boundary that, at least in part, overlaps the object;

the at least part of the gesture is detected via the touch screen on the object by the gesture being detected via the touch screen on the object during an entirety of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the gesture being detected via the touch screen on the object during an entirety of the gesture, by the object moving with movement of the gesture;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen on an area other than the object;

the blur is based only on the change in the magnitude of the gesture being detected via the touch screen;

the blur is based on the change in the magnitude of the gesture being detected via the touch screen, in addition to one or more other factors;

the at least part of the gesture on the touch screen is detected on an entirety of the object;

the at least part of the gesture on the touch screen is detected on at least a portion of the object;

the at least part of the gesture on the touch screen on the object is detected, by being detected within a selection boundary that, at least in part, overlaps the object;

the at least part of the gesture on the touch screen on the object is detected, by being detected within a predetermined distance from the object;

the magnitude on the object is detected, by being detected within a predetermined distance from the object to account for issues associated with human finger touches on the touch screen;

the change in the magnitude of the gesture being detected via the touch screen, includes a change from a zero distance magnitude to a non-zero distance magnitude;

the change in the magnitude of the gesture being detected via the touch screen, includes a change from a first non-zero distance magnitude to a second non-zero distance magnitude;

the color includes black;

the color does not include black;

the color includes white;

the color does not include white;

the color includes an absence of color;

the color does not include an absence of color;

the at least the part of the at least the initial portion of the change, includes a beginning of the gesture;

the at least the part of the at least the initial portion of the change, includes a part of the initial portion that follows the beginning of the gesture;

the at least portion of the at least one other object remains blurred after the completion of the gesture;

the at least portion of the at least one other object is no longer blurred after detection of a cessation of the gesture;

the at least portion of the at least one other object is blurred during detection of only the portion of the gesture;

the at least portion of the at least one other object is blurred during an entirety of the detection of the gesture;

the at least portion of the at least one other object is part of an interface;

the magnitude of the area of the touch screen that is blurred, is not increased as a function of the increase in the distance magnitude for an entirety of the gesture;

the magnitude of the area of the touch screen that is blurred, is not increased as a function of the increase in the distance magnitude for only a particular portion of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object only at a beginning of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object during an entirety of the gesture; or

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object during an entirety of the gesture.

Information Disclosure Statement

2. The submitted IDS documents have been entered. However, the IDS submissions dated June 2, 2023, June 6, 2023 and June 8, 2023 consist of numerous documents Applicant alleges to be pertinent prior art for consideration with no further discussion explaining the particular relevance of any documents. Any subsequent reviewing judiciary official is reminded to use careful discretion when applying the presumption of administrative competence to grant deference to the fact finding of the examiner with respect to these documents as Examiner has made no factual findings with respect to their specific content.

Furthermore, Applicant is reminded that "inequitable conduct requires not intent to withhold, but rather intent to **deceive**" (emphasis added). *Dayco Prods.*, 329 F.3d at 1367. "The intent element of the offense is . . . in the main proven by inferences drawn from facts, with the collection of inferences permitting a confident judgment that deceit has occurred." *Akron Polymer Container Corp. v. Exxel Container, Inc.*, 148 F.3d 1380, 1385 (Fed. Cir. 1998).

3. Examiner notes numerous items identified in the IDS submissions dated June 2, 2023 were not considered because they were missing date information. Applicant was informed and provided corrected IDS submissions on June 6, 2023 and June 8, 2023.

Allowable Subject Matter

4. Claims 27-32, 34-47 and 49 are allowed.

5. The following is an examiner's statement of reasons for allowance:.

The prior art of record teaches gesture input causing fog/blur effects (see at least Joo et al. USPN 2011/0273388). The prior art of record further teaches the degree of blurring can be controlled based on a motion input (see at least Yu et al. USPN 2012/0256866).

However, the prior art of record fails to teach or suggest Applicant's specifically claimed "device, comprising:

at least one non-transitory memory;

a touch screen; and

one or more processors in communication with the at least one non-transitory memory, and the touch screen, wherein the one or more processors execute instructions in the at least one non-transitory memory, to cause the device to:

display an object and at least one other object;

detect at least part of a gesture on the touch screen; and

during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a distance magnitude of the gesture being detected on the touch screen to thereby move the object on the touch screen, at least a portion of the at least one other object that is not overlapped, such that a **magnitude of**

the blur itself, and not a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude" (see at least **Claim 27** – emphasis added).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Pertinent Art

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

a. Joo et al. (USPN 2011/0273388) teaches gestures causing a fog effect;

b. Yu et al. (USPN 2012/0256866) teaches degrees of blurring based on a motion input; and

c. Gonen et al. (USPN 2014/0237378) and Sirpal et al. (USPN 2013/0076595) teach gestures causing a blur effect.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTONIO J XAVIER whose telephone number is (571)270-7688. The examiner can normally be reached M-F 530am-2pm PST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Antonio Xavier/
Primary Examiner, Art Unit 2623

Examiner-Initiated Interview Summary	**Application No.** 17/206,107	**Applicant(s)** Smith, Michael S		
	Examiner ANTONIO J XAVIER	**Art Unit** 2623	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ANTONIO J XAVIER	Primary Examiner	Telephonic
Patrick E. Caldwell (Reg. No.: 44,580)	Attorney of Record	

Date of Interview: 02 June 2023

Issues Discussed:

Proposed Amendment(s)

Examiner identified allowable subject matter and called to propose an amendment and expedite an allowance

Applicant agreed (see attached)

Examiner also notified Applicant of missing date information in the IDS submissions that needed correction

☑ Attachment

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 17/206,107	Applicant(s)/Patent Under Reexamination Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20110273388-A1	11-2011	JOO; Jong Sung	G06F3/04883	345/173
*	B	US-20120256866-A1	10-2012	Yu; Kun	G06F3/0481	345/173
*	C	US-20140237378-A1	08-2014	GONEN; Offir	H04M1/724	715/745
*	D	US-20130076595-A1	03-2013	Sirpal; Sanjiv	H05K7/02	345/1.3
	E					
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FOREIGN PATENT DOCUMENTS

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	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	**Art Unit**
	ANTONIO J XAVIER	2623

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIM		DATE								
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-	4	✓	-	-	-					
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-	12		✓	✓	-					
-	13		✓	✓	-					
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-	15		✓	✓	-					
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	Examiner	**Art Unit**
	ANTONIO J XAVIER	2623

CLAIM		DATE								
Final	Original	09/24/2021	04/22/2022	03/11/2023	06/08/2023					
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21	49				=					

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
G06F3/016	09/23/2021	AX
G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

Search Notes		
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G06F3/0413	09/23/2021	AX
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G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX
Reviewed patent family	09/23/2021	AX
Inventor	09/23/2021	AX
EAST	09/23/2021	AX
Updated EAST	04/22/2022	AX
Updated EAST	03/11/2023	AX

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
	Searched all listed above	06/08/2023	AX

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
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	ANTONIO J XAVIER	2623

CPC						
Symbol					**Type**	**Version**
G06F	/	3	/	0416	F	2013-01-01
G06F	/	3	/	016	I	2013-01-01
G06F	/	3	/	0412	I	2013-01-01
G06F	/	3	/	04883	I	2013-01-01
G06F	/	3	/	045	I	2013-01-01
G06F	/	3	/	044	I	2013-01-01
G06F	/	3	/	0414	I	2013-01-01
G06F	/	2203	/	04104	A	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	21	
/Antonio Xavier/ Primary Examiner, Art Unit 2623	08 June 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	18

U.S. Patent and Trademark Office — Part of Paper No.: 20230602

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	17/206,107	Smith, Michael S
	Examiner	**Art Unit**
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INTERNATIONAL CLASSIFICATION				
CLAIMED				
G06F	/	3	/	041
G06F	/	3	/	0488
G06F	/	3	/	044
G06F	/	3	/	01
G06F	/	3	/	045

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	21	
/Antonio Xavier/ Primary Examiner, Art Unit 2623	08 June 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	18

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☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
-	1	-	10	-	19	2	28	10	37	19	46				
-	2	-	11	-	20	3	29	11	38	20	47				
-	3	-	12	-	21	4	30	12	39	-	48				
-	4	-	13	-	22	5	31	13	40	21	49				
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-	6	-	15	-	24	-	33	15	42						
-	7	-	16	-	25	7	34	16	43						
-	8	-	17	-	26	8	35	17	44						
-	9	-	18	1	27	9	36	18	45						

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	21	
/Antonio Xavier/ Primary Examiner, Art Unit 2623	08 June 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	18

U.S. Patent and Trademark Office Part of Paper No.: 20230602

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	2	10353566	B2	2019-07-16	Pittappilly et al.	
	3	10416860	B2	2019-09-17	Missig	
	4	10528221	B2	2020-01-07	Dugan et al.	
	5	10712934	B2	2020-07-14	Lemay et al.	
	6	10712938	B2	2020-07-14	KIM et al.	
	7	10747353	B2	2020-08-18	Kim et al.	
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	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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	20	6664983	B2	2003-12-16	Ludolph	
	21	6664991	B1	2003-12-16	Chew et al.	
	22	6727830	B2	2004-04-27	Lui et al.	
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	24	7231609	B2	2007-06-12	Baudisch	
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	26	7509588	B2	2009-03-24	Os et al.	
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	28	7561201	B2	2009-07-14	Hong	
	29	7657849	B2	2010-02-02	Chaudhri et al.	
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	31	7739613	B2	2010-06-15	Lindsay	
	32	7898529	B2	2011-03-01	Fitzmaurice et al.	
	33	7966577	B2	2011-06-21	Chaudhri et al.	
	34	7996045	B1	2011-08-09	Bauer et al.	
	35	8013922	B2	2011-09-06	Isoyama	
	36	8074178	B2	2011-12-06	Hudson	
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	42	8245143	B2	2012-08-14	Yach et al.	
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	44	8296670	B2	2012-10-23	Matthews et al.	
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	46	8549432	B2	2013-10-01	Warner	
	47	8584043	B2	2013-11-12	Cho et al.	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

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	53	8683362	B2	2014-03-25	Shiplacoff et al.	
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	58	8762895	B2	2014-06-24	Mehta et al.	
	59	8776087	B2	2014-07-08	CHUN	
	60	8791994	B2	2014-07-29	Nozaki	
	61	8793607	B2	2014-07-29	Jeong et al.	
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	65	8839106	B2	2014-09-16	Lee et al.	
	66	8843844	B2	2014-09-23	Laubach	
	67	8854324	B2	2014-10-07	MUKAI et al.	
	68	8856950	B2	2014-10-07	Kim et al.	
	69	8887081	B2	2014-11-11	McRae et al.	Entire Document
	70	8896552	B2	2014-11-25	Tan et al.	
	71	8954887	B1	2015-02-10	Tseng et al.	
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	75	9052925	B2	2015-06-09	Chaudhri	
	76	9086794	B2	2015-07-21	Gil et al.	Entire Document
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	79	9104440	B2	2015-08-11	Jarrett et al.	
	80	9116615	B2	2015-08-25	Ng et al.	
	81	9125630	B2	2015-09-08	Menzel	
	82	9128544	B2	2015-09-08	CHUN	
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	84	9189142	B2	2015-11-17	Kim et al.	
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	87	9223471	B2	2015-12-29	Buxton et al.	
	88	9244545	B2	2016-01-26	Hinckley et al.	
	89	9244606	B2	2016-01-26	Kocienda et al.	
	90	9250797	B2	2016-02-02	Roberts et al.	
	91	9262002	B2	2016-02-16	Momeyer et al.	
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	93	9292161	B2	2016-03-22	CARTER et al.	
	94	9310958	B2	2016-04-12	Klutz et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020015064	A1	2002-02-07	Robotham et al.	
	2	20040051726	A1	2004-03-18	Martyn	
	3	20040075695	A1	2004-04-22	Chew et al.	
	4	20040119754	A1	2004-06-24	Bangalore et al.	
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	10	20060033713	A1	2006-02-16	Pryor	Entire Document

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	11	20060210958	A1	2006-09-21	Rimas-Ribikauskas et al.	Entire Document
	12	20060224986	A1	2006-10-05	Lindsay et al.	
	13	20060267966	A1	2006-11-30	Grossman et al.	
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	15	20070150513	A1	2007-06-28	Heuvel et al.	
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	17	20070157089	A1	2007-07-05	Os et al.	
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	24	20070300159	A1	2007-12-27	Kordun	
	25	20080016471	A1	2008-01-17	Park	
	26	20080074399	A1	2008-03-27	LEE	
	27	20080122796	A1	2008-05-29	Jobs et al.	
	28	20080165141	A1	2008-07-10	Christie	
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	31	20080207188	A1	2008-08-28	Ahn et al.	
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	33	20080244447	A1	2008-10-02	Sagar	Entire Document
	34	20080256472	A1	2008-10-16	Kim et al.	
	35	20080259045	A1	2008-10-23	Kim et al.	
	36	20080263445	A1	2008-10-23	Park	
	37	20090064013	A1	2009-03-05	Lee et al.	
	38	20090064055	A1	2009-03-05	Chaudhri et al.	
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	42	20090109182	A1	2009-04-30	Fyke et al.	
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	14	Bay-Wei Chang and David Ungar. 1993. Animation: from cartoons to the user interface. In Proceedings of the 6th annual ACM symposium on User interface software and technology (UIST '93). Association for Computing Machinery, New York, NY, USA, 45–55. https://doi.org/10.1145/168642.168647
	15	~~Belle Refresh starts to roll out for many Symbian^3 smartphones avail at http://www.allaboutsymbian.com/news/item/15570_Belle_Refresh_starts_to_roll_o.php.~~
	16	~~Best Buy Verizon~~
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	18	~~BestBuy Droid Incredible Purchase~~
	19	~~BlackBerry PlayBook Tablet User Guide Version: 1.0 avail at https://images10.newegg.com/User-Manual/User_Manual_34-103-001.pdf.~~
	20	~~BlackBerry Torch 9800 Smartphone User Guide Version: 6.0 avail at https://theinformr.com/downloads/phones/manuals/blackberry-9800-manual.pdf.~~
	21	CrossY: A Crossing-Based Drawing Application July 19, 2006 Georg Apitz and Froncois Guimbretiere Video SAM-SIT_0010
	22	~~Dell Latitude™ XT User's Guide avail at https://www.manua.ls/dell/latitude-xt/manual.~~
	23	~~DROID INCREDIBLE by HTC (Verizon Wireless) Listing ("Walmart Wireless")~~

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	24	DROID Incredible User Guide (Verizon) avail at https://www.manualslib.com/manual/562926/Htc-Droid-Incredible-4g-Lte-Verizon.html.
	25	G. Julian Lepinski, Tovi Grossman, and George Fitzmaurice. 2010. The design and evaluation of multitouch marking menus. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '10). Association for Computing Machinery, New York, NY, USA, 2233–2242. https://doi.org/10.1145/1753326.1753663
	26	G. Robertson, D. Henderson, and S. Card. 1991. Buttons as First Class Objects on an X Desktop. 35-44. UIST'91
	27	Galaxy Tab S5e 10.5 (Unlocked) Manuals and Legal Full Specs, avail at https://www.samsung.com/us/business/support/owners/product/galaxy-tab-s5e-10-5-unlocked/.
	28	Galaxy Tab S5e 10.5 (Wi-Fi) Manuals and Legal Full Specs, avail at https://www.samsung.com/us/business/support/owners/product/galaxy-tab-s5e-10-5-wi-fi/.
	29	Galaxy Tab S5e Review 4 Days Later, Battery life, FAQ & More, avail at https://www.youtube.com/watch?v=kOObpOw-V5U.
	30	Galaxy Tab S5e User Manual [Unlocked], avail at https://www.samsung.com/us/business/support/owners/product/galaxy-tab-s5e-10-5-unlocked/
	31	Galaxy Tab S5e User Manual [Wi-Fi], avail at https://www.samsung.com/us/business/support/owners/product/galaxy-tab-s5e-10-5-wi-fi/
	32	Galaxy Tab S5e will launch in the US on April 26, avail at https://www.sammobile.com/2019/04/10/galaxy-tab-s5e-release-date-us.
	33	Galaxy Tab S5e: Official Introduction newsroom, avail at https://www.youtube.com/watch?v=7OAu5nH1pWk.
	34	Geißler, Jörg. (1995). Gedrics: The Next Generation of Icons. 73-78. 10.1007/978-1-5041-2896-4_12.

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	35	Georg Apitz and François Guimbretière. 2005. CrossY: a crossing-based drawing application. ACM Trans. Graph. 24, 3 (July 2005), 930. https://doi.org/10.1145/1073204.1073286
	36	~~Get The Most Out of Your Droid Incredible BY HTC~~
	37	Gordon Paul Kurtenbach. 1993. The design and evaluation of marking menus. Ph.D. Dissertation. University of Toronto, CAN. Order Number: UMI Order No. GAXNN-82896.
	38	Grace Colby, Laura Scholl, "Transparency and blur as selective cues for complex visual information," Proc. SPIE 1460, Image Handling and Reproduction Systems Integration, (1 August 1991); https://doi.org/10.1117/12.44415
	39	Graham Wilson, Craig Stewart, and Stephen A. Brewster. 2010. Pressure-based menu selection for mobile devices. In Proceedings of the 12th international conference on Human computer interaction with mobile devices and services (MobileHCI '10). Association for Computing Machinery, New York, NY, USA, 181–190. https://doi.org/10.1145/1851600.1851631
	40	Guimbretiere, Francois & Winograd, Terry. (2000). FlowMenu: combining command, text, and data entry. 213-216. 10.1145/354401.354778.
	41	~~Hands-on with iOS 4 (photos), avail at https://www.cnet.com/pictures/hands-on-with-ios-4-photos/.~~
	42	~~Haptic Touch VS 3D Touch on iPhone 11 Pro, avail at https://www.youtube.com/watch?v=FPKXOerHS_Q.~~
	43	Hong, Jason & Landay, James. (2000). SATIN: A toolkit for informal ink-based applications. ACM SIGGRAPH 2007 Papers - International Conference on Computer Graphics and Interactive Techniques. 63-72. 10.1145/1185657.1185768.
	44	~~How the Palm Pre Predicted the Modern Smartphone, avail at https://www.youtube.com/watch?v=49h4K2etcxE.~~
	45	~~How to Do Everything, Palm® Pre™~~

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	46	~~How to get a drop down menu on iPhone (SBsettings), avail at https://www.youtube.com/watch?v=GCHdrFwblWg.~~
	47	~~HP iPAQ Pocket PC h4000 Series User Guide, avail At http://h10032.www1.hp.com/ctg/Manual/c00040425.pdf~~
	48	~~HP TouchPad debuts webOS for tablets, avail at https://www.itbusiness.ca/news/hp-touchpad-debuts-webos-for-tablets/16423.~~
	49	Hrvoje Benko, Andrew D. Wilson, and Patrick Baudisch. 2006. Precise selection techniques for multi-touch screens. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '06). Association for Computing Machinery, New York, NY, USA, 1263–1272. https://doi.org/10.1145/1124772.1124963
	50	~~HTC Droid Incredible or Verizon Wireless Review ("InfoSync Review"), avail at https://www.youtube.com/watch?v=xYjhWkEWJbg.~~

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Examiner Signature	/Antonio Xavier/	Date Considered	06/07/2023

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	Attorney Docket Number	SMITH070AT_1

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See attached certification statement.

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Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-02
Name/Print	Patrick Caldwell	Registration Number	44580

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First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

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	1	Shaun K. Kane, Jacob O. Wobbrock, and Richard E. Ladner. 2011. Usable gestures for blind people: understanding preference and performance. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11). Association for Computing Machinery, New York, NY, USA, 413–422. https://doi.org/10.1145/1978942.1979001
	2	~~Specifications Apple Newton MessagePad~~
	3	SwipePad - A Stylish Quick-Launch Utility For Your Android Phone, avail at https://www.makeuseof.com/tag/swipepad-stylish-quicklaunch-utility-android-phone/.
	4	Symbian Anna Roll Out Has Started for the Nokia N8, C7, E7 and C6-01 avail at http://www.allaboutsymbian.com/news/item/13196_Symbian_Anna_now_avail_for.php#:~:text=Symbian%20Anna%20roll%20out%20has,C7%2C%20E7%20and%20C6-01.
	5	Symbian Anna Update Now avail for Nokia N8, C7, C6-01, E7, avail at https://www.youtube.com/watch?v=SEC5muBTXNY.
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	7	Symbian Belle Showcased on a Nokia N8 in a Lengthy Video avail at https://www.phonearena.com/news/Symbian-Belle-showcased-on-a-Nokia-N8-in-a-lengthy-video_id20834.
	8	~~The iPad arrives: our first look at Apple's revolutionary new tablet~~
	9	U.S. Patent Provisional Application No. 60879253
	10	U.S. Patent Provisional Application No. 61056825
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	12	U.S. Patent Provisional Application No. 61304048
	13	U.S. Patent Provisional Application No. 61321869
	14	U.S. Patent Provisional Application No. 61386302
	15	U.S. Patent Provisional Application No. 61415179
	16	U.S. Patent Provisional Application No. 61441491
	17	U.S. Patent Provisional Application No. 61458326
	18	Vincent Levesque, Louise Oram, Karon MacLean, Andy Cockburn, Nicholas D. Marchuk, Dan Johnson, J. Edward Colgate, and Michael A. Peshkin. 2011. Enhancing physicality in touch interaction with programmable friction. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11). Association for Computing Machinery, New York, NY, USA, 2481–2490. https://doi.org/10.1145/1978942.1979306
	19	Volker Roth and Thea Turner. 2009. Bezel swipe: conflict-free scrolling and multiple selection on mobile touch screen devices. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09). Association for Computing Machinery, New York, NY, USA, 1523–1526. https://doi.org/10.1145/1518701.1518933
	20	~~Walmart Cell Phones~~
	21	~~Windows Start Menu Evolution! (95 - 11 + Betas)!, avail at https://www.youtube.com/watch?v=eb7Ot50NSc4~~

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Name/Print	Patrick Caldwell	Registration Number	44580

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	First Named Inventor	Michael S Smith
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	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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Name/Print	Patrick Caldwell	Registration Number	44580

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

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	Attorney Docket Number	SMITH070AT_1

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EXAMINER SIGNATURE			
Examiner Signature	/Antonio Xavier/	Date Considered	06/09/2023

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-08
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Bibliographic Data

Application No: 17/206,107

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /Antonio Xavier/ (Examiner's Signature) | (Initials)

Title: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/18/2021	345	2623	
RULE			

APPLICANTS

P4TENTS1 LLC, Wilmington, DE,

INVENTORS

Michael S Smith, Los Altos, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 16708418 12/09/2019 PAT 10996787

16708418 is a CON of 16377142 04/05/2019 PAT 10656753

16377142 is a CON of 16153763 10/06/2018 PAT 10275086

16153763 is a CON of 15072354 03/16/2016 PAT 10133397

15072354 is a CON of 13567004 08/03/2012 PAT 9417754

13567004 has PRO of 61581918 12/30/2011

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13567004 has PRO of 61566577 12/02/2011

13567004 has PRO of 61515835 08/05/2011

FOREIGN APPLICATIONS

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03/29/2021

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: MICHAEL S. SMITH Application No.: 17/206,107 File Date: 03/18/2021 Title: GESTURE-EQUIPPED TOUCH SCREEN SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT	Confirmation No.: 7030 Examiner: XAVIER, ANTONIO J Art Unit: 2623 Docket No.: SMITH070AT Date: 5/25/2023

AMENDMENT
with
REQUEST FOR CONTINUED EXAMINATION (RCE)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

In response to the Final Office Action mailed 03-16-2023, please consider the following believed to place the claims in condition for allowance.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1.-26. (Cancelled)

27. (Currently Amended) A device, comprising:

at least one non-transitory memory;

a touch screen; and

one or more processors in communication with the at least one non-transitory memory, and the touch screen, wherein the one or more processors execute instructions in the at least one non-transitory memory, to cause the device to:

display an object and at least one other object;

detect at least part of a gesture on the touch screen; and

during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a distance magnitude of the gesture being detected on the touch screen to thereby move the object on the touch screen, at least a portion of the at least one other object that is not overlapped, such that a magnitude of the blur itself, and not a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude.

28. (Previously Presented) The device of claim 27, wherein the device is configured such that:

the object includes a graphic object;

the object is displayed closer to a top edge of the touch screen than a bottom edge of the touch screen;

an aspect of the object other than a location thereof is modified, based on the change in the distance magnitude of the gesture being detected on the touch screen; and

the at least one other object includes a background image.

29. (Previously Presented) The device of claim 28, wherein the device is configured such that the object is
displayed closer to a right edge of the touch screen than a left edge of the touch screen.

30. (Previously Presented) The device of claim 28, wherein the device is configured such that the at least part of the gesture is detected on the touch screen on the object.

31. (Previously Presented) The device of claim 28, wherein the device is configured such that, during at least a part of at least an initial portion of the change in the distance magnitude, an entirety of the object is blurred.

32. (Previously Presented) The device of claim 28, wherein the device is configured such that, during at least a part at least an initial portion of the change in the distance magnitude, an entirety of a virtual display layer in which the object is displayed, is blurred.

33. (Cancelled)

34. (Previously Presented) The device of claim 28, wherein the device is configured such that the graphic object includes a battery icon.

35. (Previously Presented) The device of claim 28, wherein the device is configured such that the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer.

36. (Previously Presented) The device of claim 28, wherein the device is configured such that the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer that appears in front of the first virtual layer.

37. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object other than the location thereof is modified while the object continues to be displayed, based on the change in the distance magnitude of the gesture being detected on the touch screen.

38. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a size of the object.

39. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a size of the object, and another size of the at least one other object is not modified in addition to the blur, when the size of the object is modified.

40. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a color of the object.

41. (Previously Presented) The device of claim 28, wherein the device is configured such that the aspect of the object includes a color of the object, and another color of the at least one other object is not modified in addition to the blur, when the color of the object is modified.

42. (Previously Presented) The device of claim 28, wherein the device is configured such that the at least one object remains displayed to be modified after the completion of the gesture.

43. (Previously Presented) The device of claim 28, wherein the device is configured such that the blur is not caused by any overlap of the at least portion of the at least one other object.

44. (Previously Presented) The device of claim 28, wherein the device is configured such that:

the at least part of the gesture is detected on the touch screen on the object;

during at least a part of an initial change in the distance magnitude, an entirety of the object is blurred; and

the aspect of the object other than the location thereof is modified while the object continues to be displayed, based on the change in the distance magnitude of the gesture being detected on the touch screen on the object.

45. (Currently Amended) The device of claim 44, wherein the device is configured such that:

~~a magnitude of the blur itself, as opposed to a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude;~~

the graphic object includes a battery icon; and

the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer.

46. (Previously Presented) The device of claim 45, wherein the device is configured such that:

the object is displayed closer to a right edge of the touch screen than a left edge of the touch screen; and

the aspect of the object includes a size of the object, and another size of the at least one other object is not modified in addition to the blur, when the size of the object is modified.

47. (Previously Presented) The device of claim 45, wherein the device is configured such that:

the aspect of the object includes a color of the object, and another color of the at least one other object is not modified in addition to the blur, when the color of the object is modified.

48. (Cancelled)

49. (New) The device of claim 47, wherein the device is configured such that at least one of:

the object includes a dynamic object;

the other object includes a background image;

the other object includes an anchor object;

the object includes a dynamic object without a corresponding anchor object;

the gesture includes a move gesture;

the gesture includes a multiple contact gesture;

the gesture does not include a multiple contact gesture;

the blur includes a cue;

the blur is feedback for the gesture;

the blur is feedback for the gesture, and the gesture includes a move gesture;

the blur is feedback for the gesture, and the gesture includes only a move gesture;

the blur is feedback for the gesture, and the gesture includes a move gesture of an anchor and move gesture;

the blur includes a modification;

the touch screen includes a touch interface and a display;

the touch screen is a combination of a touch interface and a display;

the touch screen is on a front face of the device;

the touch screen is on a back face of the device;

based on a change in a distance magnitude of the gesture being detected on the touch screen on the object to thereby move the object on the touch screen, the at least portion of the at least one other object that is not overlapped.

the at least portion of the at least one other object that is not overlapped, is not overlapped by any object including the object;
the at least portion of the at least one other object that is not overlapped;
the one or more processors is in direct communication with the at least one non-transitory memory, and the touch screen;
the one or more processors is in indirect communication with the at least one non-transitory memory, and the touch screen;
the one or more processors is in communication, via at least one bus, with the at least one non-transitory memory, and the touch screen;
the at least one non-transitory memory includes a single memory for storing the instructions;
the at least part of the gesture is detected via the touch screen on the object, by an entirety of the gesture being detected via the touch screen on the object;
the at least part of the gesture is detected via the touch screen on the object, by only the part of the gesture being detected via the touch screen on the object;
the at least part of the gesture is detected via the touch screen on the object, by only an initial part of the gesture being detected via the touch screen on the object;
the at least part of the gesture is mutually exclusive of the at least portion of the gesture;
the at least part of the gesture overlaps, only in part, the at least portion of the gesture;
the at least part of the gesture is at least partially the same as the at least portion of the gesture;
the at least part of the gesture is the same as the at least portion of the gesture;
the gesture includes a combination of a touch gesture component and a swipe gesture component;
the gesture includes solely a swipe gesture;
the gesture includes solely a slide gesture;
the magnitude is detected utilizing one or more of a plurality of contact-sensing technologies including a capacitive-based contact sensing technology, a resistive-based

contact sensing technology, an optical-based contact sensing technology, or a surface acoustic wave-based contact sensing technology;

the touch screen is a two-dimensional layered user interface;

the touch screen is a single layer user interface that simulates a three-dimensional layered user interface through use of virtual display layers;

the at least part of the gesture on the touch screen on the object is detected, by being detected on a selection boundary that, at least in part, overlaps the object;

the at least part of the gesture is detected via the touch screen on the object by the gesture being detected via the touch screen on the object during an entirety of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the gesture being detected via the touch screen on the object during an entirety of the gesture, by the object moving with movement of the gesture;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen on an area other than the object;

the blur is based only on the change in the magnitude of the gesture being detected via the touch screen;

the blur is based on the change in the magnitude of the gesture being detected via the touch screen, in addition to one or more other factors;

the at least part of the gesture on the touch screen is detected on an entirety of the object;

the at least part of the gesture on the touch screen is detected on at least a portion of the object;

the at least part of the gesture on the touch screen on the object is detected, by being detected within a selection boundary that, at least in part, overlaps the object;

the at least part of the gesture on the touch screen on the object is detected, by being detected within a predetermined distance from the object;

the magnitude on the object is detected, by being detected within a predetermined distance from the object to account for issues associated with human finger touches on the touch screen;

the change in the magnitude of the gesture being detected via the touch screen, includes a change from a zero distance magnitude to a non-zero distance magnitude;

the change in the magnitude of the gesture being detected via the touch screen, includes a change from a first non-zero distance magnitude to a second non-zero distance magnitude;

the color includes black;

the color does not include black;

the color includes white;

the color does not include white;

the color includes an absence of color;

the color does not include an absence of color;

the at least the part of the at least the initial portion of the change, includes a beginning of the gesture;

the at least the part of the at least the initial portion of the change, includes a part of the initial portion that follows the beginning of the gesture;

the at least portion of the at least one other object remains blurred after the completion of the gesture;

the at least portion of the at least one other object is no longer blurred after detection of a cessation of the gesture;

the at least portion of the at least one other object is blurred during detection of only the portion of the gesture;

the at least portion of the at least one other object is blurred during an entirety of the detection of the gesture;

the at least portion of the at least one other object is part of an interface;

the magnitude of the area of the touch screen that is blurred, is not increased as a function of the increase in the distance magnitude for an entirety of the gesture;

the magnitude of the area of the touch screen that is blurred, is not increased as a function of the increase in the distance magnitude for only a particular portion of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object only at a beginning of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object during an entirety of the gesture; or

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object during an entirety of the gesture.

Remarks:

The claims have been clarified in a manner specifically requested by the Examiner.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
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First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9348504	B2	2016-05-24	Kwak et al.	
	2	9367205	B2	2016-06-14	Hinckley et al.	
	3	9407964	B2	2016-08-02	Somasundaram et al.	
	4	9519418	B2	2016-12-13	Tuli	
	5	9542202	B2	2017-01-10	Ording et al.	
	6	9626094	B2	2017-04-18	Fujisawa et al.	
	7	9639265	B2	2017-05-02	Peterson et al.	
	8	9652145	B2	2017-05-16	Cho et al.	

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	9	9658865	B2	2017-05-23	Kim et al.	
	10	9716825	B1	2017-07-25	Manzari et al.	
	11	9746995	B2	2017-08-29	Kotler et al.	
	12	9753630	B1	2017-09-05	Kim et al.	
	13	9762757	B2	2017-09-12	Kim	
	14	9785305	B2	2017-10-10	Ruiz et al.	
	15	9785341	B2	2017-10-10	Stallings et al.	
	16	9836749	B1	2017-12-05	Bowman	
	17	9891811	B2	2018-02-13	Federighi et al.	
	18	9979890	B2	2018-05-22	Bernstein et al.	
	19	9983777	B2	2018-05-29	KIM et al.	

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	1	~~HTC Droid Incredible or Verizon Wireless Review ("Tiger Direct")~~	
	2	~~HTC Droid Incredible Survival Guide ("Survival Guide")~~	
	3	~~Introducing Symbian^3: Email on the Nokia N8, avail at https://www.youtube.com/watch?v=q_3vpxhxBzY.~~	
	4	~~iOS 13 Beta 1 "3D Touch" (Haptic Touch) demo on iPhone SE, avail at https://www.youtube.com/shorts/W6MEoU_ZKeY.~~	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	5	~~iPad (5th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP751?locale=en_US.~~	
	6	~~iPad (6th Gen.) Technical Specifications, avail at https://support.apple.com/kb/sp774?locale=en_US.~~	
	7	iPad (7th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP807?locale=en_US.	
	8	~~iPad Air (3rd Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP787?locale=en_US.~~	
	9	~~iPad Mini (5th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP788?locale=en_US.~~	
	10	~~iPad Pro 11-inch (1st Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP784?locale=en_US.~~	
	11	iPad User Guide for iOS 4.3 Software, avail at https://manuals.info.apple.com/MANUALS/1000/MA1569/en_US/ipad_2_user_guide.pdf.	
	12	~~iPhone 11 Pro Max Technical Specifications, avail at https://support.apple.com/kb/SP806?locale=en_US.~~	
	13	~~iPhone 11 Pro Technical Specifications, avail at https://support.apple.com/kb/SP805?locale=en_US.~~	
	14	~~iPhone 11 Technical Specifications, avail at https://support.apple.com/kb/SP804?locale=en_US.~~	
	15	iPhone 4 Finger Tips Control Guide, avail at https://www.yumpu.com/en/document/view/4575775/iphone-4-finger-tips-support-apple.	

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	16	iPhone 6s Technical Specifications, avail at https://support.apple.com/kb/sp726?locale=en_US.
	17	iPhone 7 Plus Technical Specifications, avail at https://support.apple.com/kb/SP744?locale=en_US.
	18	iPhone 7 Technical Specifications, avail at https://support.apple.com/kb/SP743?locale=en_US.
	19	iPhone 8 and iPhone 8 Plus: A new generation of iPhone, avail at https://www.apple.com/newsroom/2017/09/iphone-8-and-iphone-8-plus-a-new-generation-of-iphone/.
	20	iPhone 8 Plus Camera Tips, Tricks and Features, avail at https://www.youtube.com/watch?v=FHX7-pOYdlQ.
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	27	iPhone iOS Version 7.1 User Guide, avail at https://manuals.info.apple.com/MANUALS/1000/MA1681/en_US/iphone_ios7_user_guide.pdf.	
	28	iPhone SE Technical Specifications, avail at https://www.apple.com/iphone-se/specs/.	
	29	iPhone User Guide	
	30	iPhone X Technical Specifications, avail at https://support.apple.com/kb/sp770?locale=en_US.	
	31	iPhone XR Technical Specifications, avail at https://support.apple.com/kb/SP784?locale=en_US.	
	32	iPhone XS Max Technical Specifications, avail at https://support.apple.com/kb/SP780?locale=en_US.	
	33	iPhone XS Technical Specifications, avail at https://support.apple.com/kb/SP779?locale=en_US.	
	34	iPod Touch (7th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP796?locale=en_US.	
	35	It's a DROID. It's Incredible. It's Coming to Verizon Wireless ("MediaSeed")	
	36	Jon Froehlich, Jacob O. Wobbrock, and Shaun K. Kane. 2007. Barrier pointing: using physical edges to assist target acquisition on mobile device touch screens. In Proceedings of the 9th international ACM SIGACCESS conference on Computers and accessibility (Assets '07). Association for Computing Machinery, New York, NY, USA, 19–26. https://doi.org/10.1145/1296843.1296849	
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	38	K. -U. Kyung, J. -Y. Lee and M. A. Srinivasan, "Precise manipulation of GUI on a touch screen with haptic cues," World Haptics 2009 - Third Joint EuroHaptics conference and Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems, Salt Lake City, UT, USA, 2009, pp. 202-207, doi: 10.1109/WHC.2009.4810865.
	39	Karch, Marziah., Made Simple Learning, MSL., Mazo, Gary., Nickinson, Phil., Trautschold, Martin. Droids Made Simple: For the Droid, Droid X, Droid 2, and Droid 2 Global. Netherlands: Apress, 2011.
	40	Ken Hinckley and Hyunyoung Song. 2011. Sensor synaesthesia: touch in motion, and motion in touch. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11). Association for Computing Machinery, New York, NY, USA, 801–810. https://doi.org/10.1145/1978942.1979059
	41	Ken Hinckley, Patrick Baudisch, Gonzalo Ramos, and Francois Guimbretiere. 2005. Design and analysis of delimiters for selection-action pen gesture phrases in scriboli. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '05). Association for Computing Machinery, New York, NY, USA, 451–460. https://doi.org/10.1145/1054972.1055035
	42	Kristensson, Per & Zhai, Shumin. (2007). Command strokes with and without preview: using pen gestures on keyboard for command selection. 1137-1146. 10.1145/1240624.1240797.
	43	Li, Y., 2009. Beyond pinch and flick: Enriching mobile gesture interaction. Computer, 42(12), pp.87-89.
	44	~~Neonode N1 Guide, avail at https://www.manualslib.com/manual/652544/Neonode-N1.html#product-N1~~
	45	~~Neonode N1 User Manual, avail at https://www.manualslib.com/manual/2583100/Neonode-N1.html#product-N1.~~
	46	~~Neonode N2 User Guide avail at https://www.manualslib.com/manual/893878/Neonode-N2.html#product-N2~~
	47	~~New iOS 13 Feature Haptic Touch Replaces the Old 3D Touch Screen, avail at https://www.youtube.com/watch?v=bgyHuZy8DNo.~~
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	49	Nokia 6.1 User Guide, avail at https://www.nokia.com/phones/en_int/support/api/pdf/nokia-6-1-user-guide?locale=en.
	50	Nokia Belle update now avail for N8, C7, E6, X7 and C6-01 avail at http://www.allaboutsymbian.com/news/Item/14188_The_Nokia_Belle_update_roll_ou.php.

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Examiner Signature	/Antonio Xavier/	Date Considered	06/07/2023

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	Attorney Docket Number	SMITH070AT_1

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-02
Name/Print	Patrick Caldwell	Registration Number	44580

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

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Name/Print	Patrick Caldwell	Registration Number	44580

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

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Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-08
Name/Print	Patrick Caldwell	Registration Number	44580

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	34	Neonode. "Neonode N2 User Guide." Published Jul. 2, 2007. Available at https://www.manualslib.com/manual/893878/Neonode-N2.html#product-N2	
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Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-06
Name/Print	Patrick Caldwell	Registration Number	44580

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Art Unit	2623
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	1	~~Nokia N8 Belle 111.030.0609, avail at https://www.youtube.com/watch?v=3eaGUdfMgE4.~~	
	2	Nokia N8 Data Sheet, avail at https://st.ilsole24ore.com/pdf2010/SoleOnLine5/_Oggetti_Correlati/Documenti/Tecnologie/2010/09/Nokia%20N8%20data%20sheet_sales%20start.pdf?uuid=19bb6116-bf9-11df-a542-5420bdacca78.	
	3	~~Nokia N8 Gets Official Launch, Pre-Order avail at https://www.5gtechnologyworld.com/nokia-n8-gets-official-launch-pre-order/.~~	
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	9	Nokia N8 US Preorders Start: $549 for End of September avail at https://www.slashgear.com/nokia-n8-us-preorders-start-549-for-end-of-september-1697839/.	
	10	~~Nokia N8-00 Data Sheet~~	
	11	~~Nokia N8-00 Device details~~	

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	12	~~Nokia N8-00 User Guide Issue 1.1 avail at http://i.smartphone.ua/docs/instr/instr_nokia-n8_eng.pdf.~~
	13	~~Nokia N8-00 User Guide Issue 2.1 avail at https://www.manualslib.com/manual/505169/Nokia-N8-00.html#manual~~
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	18	~~One UI Design Guidelines, avail at https://developer.samsung.com/one-ui.~~
	19	~~Palm Pre CES Press Event, avail at https://www.youtube.com/watch?v=Dw3eHOEnwTw.~~
	20	~~Palm Pre Plus User Guide (AT&T), avail at https://www.manualslib.com/manual/303104/Palm-Pre-Plus.html#manual~~
	21	~~Palm Pre Plus User Guide (Verizon), avail at https://www.manualslib.com/download/116706/Palm-Pre-Pre-Plus.html.~~
	22	~~Palm Pre Setup and Gestures, avail at https://www.youtube.com/watch?v=kOuvfDRBjbE.~~

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	23	~~Palm Pre: the missing manual®~~
	24	~~Palm® Pre™ for Dummies.pdf~~
	25	Pook, Stuart & Lecolinet, Eric & Vaysseix, Guy & Barillot, Emmanuel. (2000). Control menus: Excecution and control in a single interactor. 263-264. 10.1145/633292.633446.
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	27	R. Kosara, S. Miksch and H. Hauser, "Focus+context taken literally," in IEEE Computer Graphics and Applications, vol. 22, no. 1, pp. 22-29, Jan.-Feb. 2002, doi: 10.1109/38.974515.
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	29	R. Nero. 2010. Stacked User Inputs: Combining digital and physical layers of interaction for "same-space-multiplexed" input. Malmo University.
	30	Ramos, Gonzalo & Cockburn, Andy & Balakrishnan, Ravin & Beaudouin-Lafon, Michel. (2007). Pointing lenses: facilitating stylus input through visual-and motor-space magnification. 757-766. 10.1145/1240624.1240741.
	31	Ronald Ecker, Verena Broy, Andreas Butz, and Alexander De Luca. 2009. PieTouch: a direct touch gesture interface for interacting with in-vehicle information systems. In Proceedings of the 11th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '09). Association for Computing Machinery, New York, NY, USA, Article 22, 1–10. https://doi.org/10.1145/1613858.1613887
	32	~~S5e Quick Start Manual [Wi-Fi], avail at https://downloadcenter.samsung.com/content/UM/201903/20190330043250327/WIF_SM-T720_Galaxy_Tab_S5e_EN_IBG_P_9.0_031819_Final.pdf.~~
	33	~~Samsung Announces the Availability of the Galaxy Tab S5e and the Galaxy Tab A 10.1, avail at https://news.samsung.com/us/galaxy-tab-s5e-galaxy-tab-10-1-galaxy-view2-availability-2019/.~~

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	34	Samsung Galaxy Note 7 User Manual (Sprint), avail at https://allaboutgalaxynote.com/note_7_manual/Sprint_Samsung_galaxy_note_7_user_manual_Sprint_SM_N930P_English_language.pdf.
	35	Samsung Galaxy Note 7 User Manual (Verizon), avail at https://ss7.vzw.com/is/content/VerizonWireless/Devices/Samsung/UserGuides/Samsung%20Galaxy%20Note%207/samsung-galaxy-note-7-081216-ug.pdf.
	36	Samsung Galaxy Note 7 User Manual, avail at https://downloadcenter.samsung.com/content/UM/201610/20161027153619134/SM-N930_UM_EU_Marshmallow_Eng_Rev.1.2_161026.pdf.
	37	Samsung Galaxy Note 8 Full phone specifications, avail At https://www.gsmarena.com/samsung_galaxy_note8-8505.php.
	38	Samsung Galaxy Note 8 User Manual (AT&T), avail at https://www.att.com/ecms/dam/att/devicesupport/5000-5499/5176/Samsung-Galaxy-Note8-N950U.pdf.
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	41	Samsung Galaxy Tab S5e 10.5", 64GB, Black (Wi-Fi), avail at https://www.samsung.com/us/mobile/tablets/galaxy-tab-s/galaxy-tab-s5e-10-5-2019-wi-fi-sm-t720nzkaxar/.
	42	Samsung Galaxy Tab S5e hands-on: A solid Android Tablet, avail at https://www.youtube.com/watch?v=XNV3UB3L9aA.
	43	Samsung Galaxy Tab S5e Review - The Best Android Tablet of 2019?, avail at https://www.youtube.com/watch?v=xBmnFaKB620.
	44	Samsung Galaxy Tab S5e Review!, avail at https://www.youtube.com/watch?v=iyijtHF1wg.

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	45	Samsung Galaxy Tab S5e Review, avail at https://www.youtube.com/watch?v=mIGI8aolrzk.
	~~46~~	~~Samsung Galaxy Tab S5e Unboxing!, avail at https://www.youtube.com/watch?v=dCWmRUACEYw.~~
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	49	Samsung Introduces the New, Stylish, and Versatile Galaxy Tab S5e, avail at https://news.samsung.com/global/samsung-introduces-the-new-stylish-and-versatile-galaxy-tab-s5e.
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4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

From: pcaldwell thecaldwellfirm.com
To: Xavier, Antonio
Subject: SMITH070AT_1 (17/206-107) Proposed Amendment
Date: Friday, June 2, 2023 3:36:27 PM
Attachments: SMITH070AT_1 Proposed Amendment.docx

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Examiner Xavier,
Please consider the attached proposed amendment, which may be entered in exchange for an allowance.
Thank you,
Patrick

Patrick E. Caldwell, Esq.
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Dallas, Texas 75229-0655
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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	0	"15719406"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:33 PM
L2	0	"15072351"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:36 PM
L3	2	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:36 PM
L4	3560	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/12 12:40 PM
L5	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L6	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L7	27	L5 or L6	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L8	990	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:25 PM
L9	782	L8 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:26 PM

		short message) or (social network))					
L10	0	L4 AND L9	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:26 PM
L11	0	L4 AND L8	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L12	901	L4 AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L13	508	L12 AND pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L14	36	L13 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L15	244	L4 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L16	133	L4 AND menu AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L17	97	L16 NOT L14	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:41 PM
L18	0	(back$1touch settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/13 12:27 PM
L19	2	(back$1touch near settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/13 12:31 PM
L20	3561	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 09:58 AM
L21	82	L20 AND (touch$3 AND menu AND (social or sharing))	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 09:58 AM
L22	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	(US-PGPUB)	ADJ	ON	ON	2017/12/14 11:30 AM
L23	0	L22 AND ((pressure or magnitude) WITH (touch))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 11:30 AM
L24	0	L22 AND ((pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 11:30 AM
L25	120	(menu) WITH (social media) WITH (shar$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 01:58 PM
L26	73418	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:39 PM
L27	3561	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 06:40 PM
L28	69	L26 AND L27	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:40 PM
L29	1879	touch WITH (pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14

		or magnitude) WITH thresholds					06:59 PM
L30	4	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:59 PM
L31	62	("5745719").URPN.	(USPAT)	ADJ	ON	ON	2017/12/14 07:20 PM
L32	5	"11038590"	(USPAT)	ADJ	ON	ON	2017/12/14 07:21 PM
L33	1	"20060161871".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:22 PM
L34	1	"20060026535".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:24 PM
L35	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L36	57422	(touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L37	5	L35 and L36	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L38	45	(social network or social application) WITH (shar$3 object)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:22 PM
L39	9596	(social network or social application) WITH (post)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L40	2866	L39 AND (SMS and e$1mail)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L41	196	L40 AND (menu WITH GUI)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L42	18	L41 AND (touch WITH (pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:38 PM
L43	37	(GUI or menu) WITH (pressure or magnitude) WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:50 PM
L44	3	"12597684"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:52 PM
L45	581	((context sensitive or context$1sensitive)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/16 04:13 PM

		WITH (icon))					
L46	7	L45 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/16 04:15 PM
L47	13	menu WITH historical usage	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:40 PM
L48	1	"8191015".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:44 PM
L49	1	"20080065991".pn. AND (menu WITH usage)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:44 PM
L50	6827	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:20 PM
L51	6	L50 WITH (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:21 PM
L52	12	L50 SAME (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:22 PM
L53	233	L50 AND (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:39 PM
L54	165	L50 AND (touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 08:34 PM
L55	8887	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:43 PM
L56	10393	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L57	23568	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L58	18904	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L59	46941	L55 or L56 or L57 or L58	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L60	6344	L59 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L61	2168	L60 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L62	141649	(pressure WITH (magnitude or threshold))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:45 PM
L63	465	L62 AND L61	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:45 PM
L64	30	L63 AND L50	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:47 PM
L65	100	(slide WITH gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:32 PM
L66	3	L65 AND (slide WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:39 PM
L67	6	L65 AND (slide SAME pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:41 PM
L68	0	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20

							05:52 PM
L69	3580	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2018/01/20 05:52 PM
L70	11	L69 AND (intermediate state)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:52 PM
L71	19	L69 AND (gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:54 PM
L72	9007	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L73	10547	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L74	23888	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L75	19105	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L76	47534	(L72 or L73 or L74 or L75)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L77	843	L76 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:57 PM
L78	15	L76 AND (intermediate WITH (pressure or signal or state) WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:57 PM
L79	208	("20010005692"|"20010043291"|"20020002629"|"20020005111"|"20020008691"|"20020033919"|"20020045854"|"20020085952"|"20020116952"|"20020116959"|"20020118180"|"20020130832"|"20020180763"|"20030117408"|"20030123328"|"20030147041"|"20030151589"|"20030217972"|"20030232192"|"20030235452"|"20040084372"|"20040108995"|"20040109788"|"20040121855"|"2004019150 9"|"20040207542"|"20040212598"|"20040239624"|"20040263488"|"20050045540"|"20050099403"|"20050231461"|"20050242034"|"20050264521"|"20050280746"|"20060001654"|"20060001800"|"20060033701"|"20060077186"|"20060107719"|"20060138983"|"20060146032"|"20060167400"|"2006017908	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:23 PM

		8"|"20060195064"|"200 60197736"|"200601977 37"|"20060209039"|"20 060238495"|"20060260 711"|"20060262099"|"2 0060284874"|"2007000 8064"|"20070035526"|" 20070040814"|"200700 70047"|"20070085837"| "20070103454"|"20070 137901"|"20070146313 "|"20070148371"|"2007 0153215"|"2007017690 2"|"20070182864"|"200 70195029"|"200702294 77"|"20070237170"|"20 070262967"|"20080007 675"|"20080018613"|"2 0080024459"|"2008002 4712"|"20080060854"|" 20080062169"|"200800 68343"|"20080094367"| "20080100584"|"20080 105600"|"20080130910 "|"20080136790"|"2008 0158171"|"2008020442 7"|"20080210843"|"200 80211786"|"200802151 92"|"20080252607"|"20 080252616"|"20080259 046"|"20080295839"|"2 0080304431"|"2009000 2312"|"20090022256"|" 20090036176"|"200900 46110"|"20090051659"| "20090066660"|"20090 073138"|"20090086420 "|"20090091536"|"2009 0143652"|"2009015815 2"|"20090160781"|"200 90213066"|"200902250 53"|"20090271731"|"20 090289912"|"20090295 747"|"20100005390"|"2 0100017872"|"2010002 0039"|"20100026640"|" 20100035656"|"201000 45612"|"20100053103"| "20100053532"|"20100 077829"|"20100079398 "|"20100085500"|"2010 0097347"|"2010013442 9"|"20100134448"|"201 00149101"|"201001491 24"|"20100164884"|"20 100188365"|"20100194 709"|"20100201651"|"2 0100206560"|"2010020					

		7900"|"20100214499"|"20100222735"|"20100225608"|"20100259490"|"20100277432"|"20110001706"|"20110007023"|"20110012921"|"20110025969"|"20110037726"|"20110044064"|"20110050591"|"20110050592"|"20110050593"|"20110050594"|"20110050608"|"20110051334"|"20110063248"|"20110088416"|"20110102336"|"20110102347"|"20110105446"|"20110109573"|"20110115738"|"20110118029"|"20110122084"|"20110152739"|"20110169775"|"20110175845"|"20110181552"|"20110210942"|"20110210943"|"20110227836"|"20110227877"|"20110239110"|"20110248941"|"20110254793"|"20110260994"|"20110273394"|"20110273396"|"20110291953"|"20120007821"|"20120013566"|"20120019448"|"20120023450"|"20120032876"|"20120034954"|"20120044172"|"20120056846"|"20120086670"|"20120105367"|"20120105370"|"20120109037"|"20120154328"|"20120162087"|"20120182249"|"20120194461"|"20120194462"|"20120223900"|"20120229403"|"20120229404"|"20120229405"|"20120231853"|"20120240044"|"20120242610"|"20120244348"|"20120254747"|"20120266072"|"20120274662"|"20120293449"|"20120306764"|"20120306765"|"20120306766"|"20120313888"|"20130002610"|"20130009869"|"20130021285"|"20130021295"|"20130027350").PN.					
L80	234	("20130124993"|"20130125322"|"20130127765"|"20130132838"|"2013	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:24 PM

		0141388"|"2013018192 8"|"20130181931"|"201 30188336"|"201302150 64"|"20130307809"|"20 130307827"|"20130321 317"|"20130332876"|"2 0130335357"|"2014002 8601"|"20140057102"|" 20140066139"|"201400 96092"|"20140099235"| "20140104219"|"20140 104220"|"20140132548 "|"20140132549"|"2014 0134433"|"2014013443 4"|"20140139473"|"201 40168128"|"201401919 62"|"20140208248"|"20 140210786"|"20140340 358"|"20140368455"|"2 0150068526"|"2015019 7670"|"20150234518"|" 20150253609"|"363332 2"|"3738166"|"3772685" |"3777222"|"4293734"|" 4296756"|"4302011"|"4 353552"|"4524421"|"45 54419"|"4636632"|"464 4101"|"4770281"|"5241 308"|"5247434"|"52767 87"|"5305423"|"530917 2"|"5311302"|"5343650" |"5386219"|"5448263"|" 5486286"|"5487827"|"5 566096"|"5680160"|"57 42894"|"5743859"|"574 4027"|"5838244"|"5856 822"|"5947334"|"59998 92"|"6108064"|"611843 5"|"6141000"|"6193152" |"6283763"|"6284131"|" 6337681"|"6351271"|"6 392638"|"6417845"|"64 41807"|"6509847"|"652 6315"|"6533757"|"6567 102"|"6626013"|"66362 03"|"6689947"|"672101 9"|"6738514"|"6747636" |"6776546"|"6791640"|" 6801211"|"6879318"|"6 880998"|"6888537"|"69 17282"|"6919927"|"693 3991"|"6961015"|"6967 903"|"7030854"|"70979 03"|"7098776"|"712214 9"|"7138984"|"7205983" |"7254973"|"7289113"|" 7303680"|"7312784"|"7 312791"|"7315336"|"73					

		18892"|"7405779"|"742 3557"|"7437221"|"7535 463"|"7626579"|"76392 39"|"7649577"|"764960 5"|"7659885"|"7675580" |"7692627"|"7692637"|" 7701329"|"7705824"|"7 738068"|"7755612"|"79 03096"|"7932893"|"795 2566"|"7973777"|"7973 778"|"7982721"|"80229 33"|"8057419"|"806802 1"|"8072430"|"8094134" |"8094673"|"8102496"|" 8184228"|"8188982"|"8 199116"|"8207945"|"82 09628"|"8223799"|"822 8309"|"8253699"|"8269 731"|"8269733"|"82701 48"|"8279361"|"828610 2"|"8310452"|"8319743" |"8325143"|"8334835"|" 8334850"|"8345018"|"8 349228"|"8373675"|"83 84674"|"8411039"|"841 6210"|"8424590"|"8427 434"|"8451238"|"84718 24"|"8477111"|"847911 0"|"8487900"|"8493384" |"8497884"|"8508494"|" 8542193"|"8542209"|"8 553012"|"8564559"|"85 87542"|"8624851"|"862 4867"|"8638311"|"8648 839"|"8654104"|"86749 47"|"8692815"|"869877 7"|"8717303"|"8723826" |"8727557"|"8743076"|" 8745514"|"8754862"|"8 760408"|"8780089"|"88 16993"|"8854317"|"886 6785"|"8872798"|"8878 809"|"8878810"|"88849 13"|"8896575"|"891303 1"|"8917262"|"8947381" |"8970540"|"8976128"|" 8982081"|"8988364"|"9 003591"|"9013414"|"90 18030"|"9030427"|"903 5897"|"9041679"|"9045 670"|"9046999"|"90635 97"|"9069204"|"906941 6"|"9069460"|"9092129" |"9098193"|"9116609"|" 9125630"|"9130651"|"9 134880"|"9152258"|"91 52288"|"RE41716").PN.					
L81	442	L79 or L80	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20

							06:24 PM
L82	17	L81 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:24 PM
L83	297	L81 AND (second WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L84	58	L81 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L85	1	L81 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L86	1632	g06f2203/04105.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L87	302	L86 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L88	302	L86 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L89	1	L86 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L90	50	L86 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:36 PM
L91	0	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/08/08 02:49 PM
L92	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/09/07 05:56 PM
L97	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/12/28 10:31 AM
L98	1	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/12/28 11:22 AM
L101	1	"10133397".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/01/04 01:09 PM
L102	3794	(("SMITH") near3	(US-PGPUB; USPAT;	ADJ	ON	ON	2019/01/04

		("Michael")).INV.	USOCR)				05:47 PM
L111	0	"16377142"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/05 05:13 PM
L112	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/07 11:06 AM
L113	344	(virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/07 11:45 AM
L114	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:32 PM
L115	0	"2010175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:35 PM
L116	1	"20110175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:35 PM
L117	2647	(pressure or magnitude) WITH (selection WITH (size))	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:38 PM
L118	87	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:39 PM
L119	2	"14144140"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:52 PM
L120	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2019/08/26 12:52 PM
L121	3953	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2019/08/27 10:25 AM
L122	33	L121 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:25 AM
L123	12635	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L124	14233	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L125	32534	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L126	24788	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L127	62711	(L123 or L124 or L125 or L126)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L128	2317	L127 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L129	82	L127 AND (scal$3 near object).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:30 AM
L130	1	(pressure or magnitude) WITH (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM

		WITH (invers$2 near proportional)					
L131	570	(pressure or magnitude) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM
L132	5	L131 SAME (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM
L133	2751	(pressure or magnitude or touch) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:01 AM
L134	2645	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:14 AM
L135	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:14 AM
L136	0	"13567004".an.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:15 AM
L137	26	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:15 AM
L138	13453	(inversely near (related or proportional)) WITH (pressure or magnitude)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:22 PM
L139	212	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:23 PM
L140	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
L141	0	"09236513".an. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
L142	1	"6323846".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L143	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L144	1	"6323846".pn. AND (inversely)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L152	1	"6323846".pn. AND (invers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/05 11:29 PM
L153	1	"9417754".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/01/16 08:06 PM
L154	1	"16377142" AND watch	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/01/29 12:20 PM
L155	1	"15719406"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L156	16	"15072351"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L157	29	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:44 AM
L158	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L159	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L160	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L161	27	L159 or L160	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L162	1511	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L163	1221	L162 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or short message) or (social network))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L164	18	L158 AND L163	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L165	18	L158 AND L162	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L166	1079	L158 AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L167	606	L166 AND pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM

L168	67	L167 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L169	295	L158 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L170	178	L158 AND menu AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L171	111	L170 NOT L168	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L172	0	(back$1touch settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L173	29	(back$1touch near settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L174	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L175	123	L174 AND (touch$3 AND menu AND (social or sharing))	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L176	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/02/01 10:44 AM
L177	0	L176 AND ((pressure or magnitude) WITH (touch))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L178	0	L176 AND ((pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L179	209	(menu) WITH (social media) WITH (shar$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L180	95945	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L181	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L182	83	L180 AND L181	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L183	2900	touch WITH (pressure or magnitude) WITH thresholds	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L184	10	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L185	71	("5745719").URPN.	(USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L186	6	"11038590"	(USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L187	1	"20060161871".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:44 AM
L188	1	"20060026535".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L189	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L190	76329	(touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L191	5	L189 and L190	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L192	57	(social network or social application) WITH (shar$3 object)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L193	14100	(social network or social application) WITH (post)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L194	4005	L193 AND (SMS and e$1mail)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L195	268	L194 AND (menu WITH GUI)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L196	29	L195 AND (touch WITH (pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L197	51	(GUI or menu) WITH (pressure or magnitude) WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L198	3	"12597684"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L199	626	((context sensitive or context$1sensitive) WITH (icon))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L200	8	L199 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L201	18	menu WITH historical usage	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L202	1	"8191015".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L203	1	"20080065991".pn. AND (menu WITH usage)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM

L204	10465	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L205	9	L204 WITH (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L206	19	L204 SAME (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L207	396	L204 AND (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L208	278	L204 AND (touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L209	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L210	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L211	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L212	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L213	67346	L209 or L210 or L211 or L212	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L214	9404	L213 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L215	3375	L214 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L216	170031	(pressure WITH (magnitude or threshold))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L217	1011	L216 AND L215	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L218	60	L217 AND L204	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L219	185	(slide WITH gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L220	9	L219 AND (slide WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L221	36	L219 AND (slide SAME pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L222	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L223	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L224	12	L223 AND (intermediate state)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L225	48	L223 AND (gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L226	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L227	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:45 AM
L228	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L229	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L230	67346	(L226 or L227 or L228 or L229)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L231	1254	L230 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L232	20	L230 AND (intermediate WITH (pressure or signal or state) WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L233	208	("20010005692"|"20010043291"|"20020002629"|"20020005111"|"20020008691"|"20020033919"|"20020045854"|"20020085952"|"20020116952"|"20020116959"|"20020118180"|"20020130832"|"20020180763"|"20030117408"|"20030123328"|"20030147041"|"20030151589"|"20030217972"|"20030232192"|"20030235452"|"20040084372"|"20040108995"|"20040109788"|"20040121855"|"20040191509"|"20040207542"|"20040212598"|"20040239624"|"20040263488"|"20050045540"|"20050099403"|"20050231461"|"20050242034"|"20050264521"|"20050280746"|"20060001654"|"20060001800"|"20060033701"|"20060077186"|"20060107719"|"20060138983"|"20060146032"|"20060167400"|"20060179088"|"20060195064"|"20060197736"|"20060197737"|"20060209039"|"20060238495"|"20060260711"|"20060262099"|"20060284874"|"20070008064"|"20070035526"|"20070040814"|"20070070047"|"20070085837"|"20070103454"|"20070137901"|"20070146313"|"20070148371"|"2007	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		0153215"|"2007017690 2"|"20070182864"|"200 70195029"|"200702294 77"|"20070237170"|"20 070262967"|"20080007 675"|"20080018613"|"2 0080024459"|"2008002 4712"|"20080060854"|" 20080062169"|"200800 68343"|"20080094367"| "20080100584"|"20080 105600"|"2008013091 0 "|"20080136790"|"2008 0158171"|"2008020442 7"|"20080210843"|"200 80211786"|"200802151 92"|"20080252607"|"20 080252616"|"20080259 046"|"20080295839"|"2 0080304431"|"2009000 2312"|"20090022256"|" 20090036176"|"200900 46110"|"20090051659"| "20090066660"|"20090 073138"|"20090086420 "|"20090091536"|"2009 0143652"|"2009015815 2"|"20090160781"|"200 90213066"|"200902250 53"|"20090271731"|"20 090289912"|"20090295 747"|"20100005390"|"2 0100017872"|"2010002 0039"|"20100026640"|" 20100035656"|"201000 45612"|"20100053103"| "20100053532"|"20100 077829"|"20100079398 "|"20100085500"|"2010 0097347"|"2010013442 9"|"20100134448"|"201 00149101"|"201001491 24"|"20100164884"|"20 100188365"|"20100194 709"|"20100201651"|"2 0100206560"|"2010020 7900"|"20100214499"|" 20100222735"|"201002 25608"|"20100259490"| "20100277432"|"20110 001706"|"20110007023 "|"20110012921"|"2011 0025969"|"2011003772 6"|"20110044064"|"201 10050591"|"201100505 92"|"20110050593"|"20 110050594"|"20110050 608"|"20110051334"|"2					

		0110063248"|"20110088416"|"20110102336"|"20110102347"|"20110105446"|"20110109573"|"20110115738"|"20110118029"|"20110122084"|"20110152739"|"20110169775"|"2011017584 5"|"20110181552"|"20110210942"|"20110210943"|"20110227836"|"20110227877"|"20110239110"|"20110248941"|"20110254793"|"20110260994"|"20110273394"|"20110273396"|"20110291953"|"20120007821"|"20120013566"|"20120019448"|"20120023450"|"20120032876"|"20120034954"|"20120044172"|"20120056846"|"20120086670"|"20120105367"|"20120105370"|"20120109037"|"20120154328"|"20120162087"|"20120182249"|"20120194461"|"20120194462"|"20120223900"|"20120229403"|"20120229404"|"20120229405"|"20120231853"|"20120240044"|"20120242610"|"20120244348"|"20120254747"|"20120266072"|"20120274662"|"20120293449"|"20120306764"|"20120306765"|"20120306766"|"20120313888"|"20130002610"|"20130009869"|"20130021285"|"20130021295"|"20130027350").PN.					
L234	234	("20130124993"|"20130125322"|"20130127765"|"20130132838"|"20130141388"|"20130181928"|"20130181931"|"20130188336"|"20130215064"|"20130307809"|"20130307827"|"20130321317"|"20130332876"|"20130335357"|"20140028601"|"20140057102"|"20140066139"|"20140096092"|"20140099235"|"20140104219"|"20140104220"|"20140132548	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		"|"20140132549"|"2014 0134433"|"2014013443 4"|"20140139473"|"201 40168128"|"201401919 62"|"20140208248"|"20 140210786"|"20140340 358"|"20140368455"|"2 0150068526"|"2015019 7670"|"20150234518"|" 20150253609"|"363332 2"|"3738166"|"3772685" |"3777222"|"4293734"|" 4296756"|"4302011"|"4 353552"|"4524421"|"45 54419"|"4636632"|"464 4101"|"4770281"|"5241 308"|"5247434"|"52767 87"|"5305423"|"530917 2"|"5311302"|"5343650" |"5386219"|"5448263"|" 5486286"|"5487827"|"5 566096"|"5680160"|"57 42894"|"5743859"|"574 4027"|"5838244"|"5856 822"|"5947334"|"59998 92"|"6108064"|"611843 5"|"6141000"|"6193152" |"6283763"|"6284131"|" 6337681"|"6351271"|"6 392638"|"6417845"|"64 41807"|"6509847"|"652 6315"|"6533757"|"6567 102"|"6626013"|"66362 03"|"6689947"|"672101 9"|"6738514"|"6747636" |"6776546"|"6791640"|" 6801211"|"6879318"|"6 880998"|"6888537"|"69 17282"|"6919927"|"693 3991"|"6961015"|"6967 903"|"7030854"|"70979 03"|"7098776"|"712214 9"|"7138984"|"7205983" |"7254973"|"7289113"|" 7303680"|"7312784"|"7 312791"|"7315336"|"73 18892"|"7405779"|"742 3557"|"7437221"|"7535 463"|"7626579"|"76392 39"|"7649577"|"764960 5"|"7659885"|"7675580" |"7692627"|"7692637"|" 7701329"|"7705824"|"7 738068"|"7755612"|"79 03096"|"7932893"|"795 2566"|"7973777"|"7973 778"|"7982721"|"80229 33"|"8057419"|"806802					

		1"|"8072430"|"8094134"|"8094673"|"8102496"|"8184228"|"8188982"|"8199116"|"8207945"|"8209628"|"8223799"|"8228309"|"8253699"|"8269731"|"8269733"|"8270148"|"8279361"|"8286102"|"8310452"|"8319743"|"8325143"|"8334835"|"8334850"|"8345018"|"8349228"|"8373675"|"8384674"|"8411039"|"8416210"|"8424590"|"8427434"|"8451238"|"8471824"|"8477111"|"8479110"|"8487900"|"8493384"|"8497884"|"8508494"|"8542193"|"8542209"|"8553012"|"8564559"|"8587542"|"8624851"|"8624867"|"8638311"|"8648839"|"8654104"|"8674947"|"8692815"|"8698777"|"8717303"|"8723826"|"8727557"|"8743076"|"8745514"|"8754862"|"8760408"|"8780089"|"8816993"|"8854317"|"8866785"|"8872798"|"8878809"|"8878810"|"8884913"|"8896575"|"8913031"|"8917262"|"8947381"|"8970540"|"8976128"|"8982081"|"8988364"|"9003591"|"9013414"|"9018030"|"9030427"|"9035897"|"9041679"|"9045670"|"9046999"|"9063597"|"9069204"|"9069416"|"9069460"|"9092129"|"9098193"|"9116609"|"9125630"|"9130651"|"9134880"|"9152258"|"9152288"|"RE41716").PN.				
L235	442	L233 or L234	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L236	17	L235 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L237	297	L235 AND (second WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L238	58	L235 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

L239	1	L235 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L240	3223	g06f2203/04105.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L241	781	L240 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L242	781	L240 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L243	12	L240 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L244	147	L240 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L245	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L246	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L247	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L248	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L249	1	"10133397".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L250	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L251	1	"16377142"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L252	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L253	360	(virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

L254	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L255	0	"2010175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L256	1	"20110175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L257	2720	(pressure or magnitude) WITH (selection WITH (size))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L258	90	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L259	2	"14144140"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L260	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L261	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L262	36	L261 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L263	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L264	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L265	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L266	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L267	67346	(L263 or L264 or L265 or L266)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L268	2491	L267 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L269	88	L267 AND (scal$3 near object).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L270	2	(pressure or magnitude) WITH (touch or gesture) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L271	573	(pressure or magnitude) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L272	6	L271 SAME (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L273	2783	(pressure or magnitude or touch) WITH	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		(threshold) WITH (invers$3 or revers$3)					
L274	2677	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L275	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L276	0	"13567004".an.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L277	29	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L278	13560	(inversely near (related or proportional)) WITH (pressure or magnitude)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L279	217	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L280	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L281	0	"09236513".an. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L282	1	"6323846".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L283	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L284	1	"6323846".pn. AND (inversely)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L285	1	"6323846".pn. AND (invers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L286	1	"9417754".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L287	1	"16377142" AND watch	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L309	3	"20060026535".pn. or "20110248941".pn. or "20100153879".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/03 09:30 AM
L310	160	(gesture WITH boundary WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/08 05:45 PM
L311	214	(gesture WITH menu WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/08 05:56 PM
L312	8	(menu WITH (cross$1through or cross through or cross$1over or cross over) WITH (select or selection))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:46 AM
L313	487	(menu WITH (boundary) WITH	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:47 AM

		(select or selection))					
L314	20	(menu WITH (boundary) WITH (select or selection) WITH (movement))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:48 AM
L315	551	((pie or radial or circle) near (menu)) AND ((movement or gesture) WITH (selection))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:50 AM
L316	59	((edge or corner) WITH (pie or radial or circle) near menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 10:23 AM
L317	59	((edge or corner) WITH ((pie or radial or circle) near menu))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 10:23 AM
L318	8	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/03/10 12:33 PM
L319	3	L318 AND ((launch or open) WITH (program or application or interface))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:33 PM
L320	10	((pie or radial or circle) near (menu)) WITH ((launch or open) near (program or application))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:38 PM
L321	150	((pie or radial or circle) near (menu)) WITH ((application))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:40 PM
L322	0	(menu WITH (boundary) WITH (cross through or sweep through))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:11 PM
L323	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:12 PM

L324	9	L323 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:12 PM
L325	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 07:34 PM
L326	7	L325 AND (replac$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 07:34 PM
L327	21869	g06f3/0416.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L328	12506	g06f3/016.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L329	18435	g06f3/0412.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L330	6100	g06f3/0414.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L331	30655	g06f3/044.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L332	4212	g06f3/045.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L333	26778	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L334	4601	g06f2203/04104.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L335	80346	L327 or L328 or L329 or L330 or L331 or L332 or L333 or L334	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L336	996	L335 AND (boundary WITH gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:04 PM
L337	137	L336 AND (display WITH (ceas$3 AND maintain$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:05 PM
L338	4099	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/03/11 06:12 PM
L339	3	L338 AND (ceasing near display).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/03/11 06:12 PM
L340	35403	(GUI) AND ((application or program) WITH (top or locked or anchor or protected))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 09:52 AM
L341	5458	(GUI) AND ((application	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06

		or program) WITH (top or locked or anchor or protected) WITH (display))					09:52 AM
L342	21	(GUI) AND ((application or program) WITH (top or locked or anchor or protected) WITH (maintain$3 near display))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 09:52 AM
L343	316	(GUI) AND (menu WITH (protect$3 or ignor$3 or lock$3) WITH mode)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 10:05 AM
L344	2	"13492764"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 10:15 AM
L345	8	("20020116420" | "20090288032" | "20100146384" | "20100159995" | "20100269040" | "20100306705" | "20110047368" | "20120032984").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/04/06 10:16 AM
L346	27	(gesture WITH (edge or boundary) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:21 PM
L347	217	(gesture WITH (edge or boundary)) AND ((finger or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:23 PM
L348	74	(gesture WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:32 PM
L349	126	(swipe WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:33 PM
L350	2121	(lock$3 or protect$3) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 05:59 AM
L351	0	L350 AND (touch or gesture) AND (radial menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 05:59 AM
L352	0	L350 AND ((pie or circle or circular or radial) near menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:00 AM
L353	144	L350 AND (menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:00 AM

L354	2	(parental control) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:02 AM
L355	27	(parental control) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:03 AM
L356	347	(parent or parental) WITH (inactive or disabled or prohibited or locked) AND (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L357	347	((parent or parental) WITH (inactive or disabled or prohibited or locked)) AND (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L358	6	((parent or parental) WITH (inactive or disabled or prohibited or locked)) WITH (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L359	274	(disabl$3 or prevent$3 or lock$3) WITH (application or program or icon) WITH (launch$3 or execut$3) WITH (child or parental)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:14 AM
L360	54	("20110252240"|"20120005723"|"20120109826"|"7721087"|"20060168259"|"20130074142"|"20030233410"|"20100325710"|"20100024016"|"20060149846"|"20100281487"|"6516421"|"20120210443"|"20110210171"|"20100299376"|"8005469"|"20120324067"|"20090300707"|"20060015621"|"20060242685"|"20070254631"|"20100081417"|"20100274910"|"20120131685"|"20110270963"|"20120005745"|"20090181662"|"20070050854"|"20110010699"|"20090254753"|"20120157166"|"20130174222"|"20090031393"|"20100175104"|"20070204166"|"20120214442"|"20020013815"|"20120023573"|"20130219465"|"20040260710"|"7603466"|"8495700"|"20100	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:20 AM

		024020"|"20070204153"|"8208900"|"20080028442"|"20120214503"|"20080184336"|"20090260052"|"20090068996"|"20100024020"|"20100299719"|"6125447"|"7917963"|"8931042").PN.					
L361	4850	(parent or parental) near (lock or disable or access)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:26 AM
L362	83	L361 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:26 AM
L363	1032	(disabl$3 or lock$3) WITH (icon or application) WITH GUI	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:49 AM
L364	70	(disabl$3 or lock$3) WITH (icon or application) WITH GUI WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:50 AM
L365	4	(ignor$3 WITH (flick or swipe) WITH (menu))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:54 AM
L366	276	(ignor$3 WITH (flick or swipe))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:55 AM
L367	21	(ignor$3 WITH (flick or swipe) WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:55 AM
L368	17	(ignor$3 WITH (flick or swipe) WITH mode)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:56 AM
L369	0	(touch WITH menu WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:58 AM
L370	7	(menu WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:58 AM
L371	0	(touch WITH window WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:59 AM
L372	46	(phone or mobile) WITH (contacts) WITH (edge) WITH (swipe or flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:00 AM
L373	0	(phone or mobile) WITH (missed call) WITH (edge) WITH (swipe or flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:01 AM
L374	1	"20060210958".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:02 AM
L375	0	"13567004".an. AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 12:01 AM
L376	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-	(US-PGPUB)	ADJ	ON	ON	2020/08/12 09:15 PM

		$).did.					
L377	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/08/12 09:15 PM
L378	17	L376 or L377	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:15 PM
L379	3	L378 AND (home$1screen or home screen)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:15 PM
L380	253	(icon or gesture) WITH (return near (home$1screen or home screen))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:16 PM
L381	0	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND L378	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:05 PM
L382	3	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND L380	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:05 PM
L383	124	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (icon or button)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:06 PM
L384	66	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:11 PM
L385	4050	(calendar WITH contacts WITH (mail or e$1mail)) AND (home WITH (icon or button))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:25 PM
L386	1125	L385 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L387	155	(calendar WITH contacts WITH (mail or e$1mail)) SAME (home WITH (icon or button))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L388	92	L387 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L389	50	"13567004" AND (home)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:47 PM

L390	0	"13567004".an. AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 06:58 AM
L391	50	"13567004" AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 06:59 AM
L392	2	"20120180001".pn. OR "20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/06 10:28 AM
L393	18	(US-20110302493-$ or US-20080177662-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$ or US-20100251119-$ or US-20100127983-$ or US-20100241989-$ or US-20100088654-$ or US-20050114794-$ or US-20110061021-$ or US-20120054691-$ or US-20120306788-$ or US-20120182296-$).did. or (US-9524042-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:06 PM
L394	2	(US-20100088654-$ or US-20100127983-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L395	14	(US-20130162667-$ or US-20120306788-$ or US-20120225413-$ or US-20110196935-$ or US-20110175805-$ or US-20110145764-$ or US-20100313166-$ or US-20100026640-$ or US-20090207175-$ or US-20080219493-$ or US-20080204427-$ or US-20080178126-$ or US-20080024459-$ or US-20040150644-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L396	1	(US-20100153879-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L397	3	(US-20100153879-$ or US-20060026535-$ or US-20110248941-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L398	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM

		US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.					
L399	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L400	1	(US-20120159380-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L401	86000	L393 or L394 or L395 or L396 or "l6" or L397 or L398 or L399 or "l0"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
L402	131	L401 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
L403	37409	L393 or L394 or L395 or L396 or L397 or L398 or L399 or "l0"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L404	51	L393 or L394 or L395 or L396 or L397 or L398 or L399 or L400	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L405	5	L404 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L406	27	L404 AND ((custom or program$5) WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:43 PM
L407	133	(US-20020130836-$ or US-20080018585-$ or US-20040239602-$ or US-20030227433-$ or US-20060001637-$ or US-20050030292-$ or US-20030048262-$ or US-20060063298-$ or US-20050083426-$ or US-20040012551-$ or US-20050154798-$ or US-20060227117-$ or US-20050134337-$ or US-20030076343-$ or US-20070069798-$ or US-20040263506-$ or US-20090251452-$ or US-20080002122-$ or US-20100060806-$ or US-20030011581-$ or US-20050206991-$ or US-20050185108-$ or	(US-PGPUB; USPAT; JPO; DERWENT)	ADJ	ON	ON	2021/01/08 01:46 PM

		US-20020196238-$ or US-20110007035-$ or US-20080246739-$ or US-20050212746-$).did. or (US-20050262882-$ or US-20070120828-$ or US-20010043167-$ or US-20090058829-$ or US-20080309627-$ or US-20070091292-$ or US-20020057266-$ or US-20020044208-$ or US-20090085881-$ or US-20020196163-$ or US-20040109096-$ or US-20060071887-$ or US-20040160406-$ or US-20040143569-$ or US-20090018419-$ or US-20040150594-$ or US-20070188969-$ or US-20090322689-$ or US-20100090982-$ or US-20090267870-$ or US-20040130524-$ or US-20020167500-$ or US-20080055303-$ or US-20130127800-$ or US-20080231605-$ or US-20120268422-$ or US-20140035818-$).did. or (US-20060033713-$ or US-20080255795-$ or US-20060152484-$ or US-20110164076-$ or US-20100064244-$ or US-20080180406-$ or US-20040150631-$ or US-20110285636-$ or US-20110275317-$ or US-20110037712-$ or US-20100156883-$ or US-20100137079-$ or US-20090195417-$ or US-20090115772-$ or US-20080238879-$ or US-20060262251-$ or US-20130076649-$ or US-20120060123-$ or US-20090040233-$ or US-20080170025-$ or US-20080129904-$ or US-20050123333-$ or US-20060210958-$ or US-20070161382-$ or US-20080178126-$ or US-20040041781-$ or					

		US-20020137550-$).did. or (US-20110298531-$ or US-20080211760-$ or US-20040179005-$ or US-20020041708-$ or US-20070052934-$ or US-20100188327-$ or US-20110276923-$ or US-20060107146-$ or US-20130167062-$ or US-20090189881-$ or US-20160041581-$ or US-20140042406-$).did. or (US-5982302-$ or US-5182549-$ or US-6294875-$ or US-5666288-$ or US-6229506-$ or US-6469684-$ or US-4288836-$ or US-5528235-$ or US-5745719-$ or US-5612690-$ or US-6597347-$ or US-5760767-$ or US-5770997-$ or US-5187776-$ or US-5767832-$ or US-5473343-$ or US-4139837-$ or US-6297788-$ or US-6356223-$ or US-5581243-$ or US-6204839-$ or US-6043638-$ or US-6310611-$ or US-6286104-$ or US-6748249-$ or US-5701597-$).did. or (US-5534892-$ or US-7194702-$ or US-6252563-$ or US-6011545-$ or US-6192080-$ or US-7551341-$ or US-6705868-$ or US-7697656-$ or US-6903662-$ or US-8593448-$ or US-8089376-$ or US-6396483-$ or US-7293231-$).did. or (JP-11352938-$).did. or (WO-0026890-$).did.					
L408	4	L407 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:47 PM

L410	2	"20120180001".pn. or "20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 06:19 PM
L433	0	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 12:19 PM
L434	4453	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/20 12:20 PM
L435	2	L434 AND (boundary WITH edge).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/20 12:20 PM
L436	24	"15879111"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 06:16 PM
L437	1	"16708418"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 06:22 PM
L438	11334	g06f3/0416.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L439	15705	g06f3/016.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L440	24118	g06f3/0412.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L441	2289	g06f3/0414.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L442	12706	g06f3/044.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L443	4900	g06f3/045.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L444	31526	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L445	5338	g06f2203/04104.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L446	82108	L438 or L439 or L440 or L441 or L442 or L443 or L444 or L445	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L447	47	L446 AND (ignor$3 WITH (flick or swipe or gesture) WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L448	0	(("SMITH") near3 ("Michael")).INV. AND ("not" displaying).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/23 01:50 PM
L449	4	(("SMITH") near3 ("Michael")).INV. AND (maintaining display).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/23 01:51 PM
L450	1	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/29 10:02 PM
L451	4	(US-20120180001-$ OR US-20100159995-$ OR US-20090174679-$).did. OR (US-10996787-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/29 10:04 PM
L452	1	"10996787".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/30 03:56 PM
L453	1	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/30

							03:57 PM
L454	5157	((("SMITH") near3 ("Michael"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 11:49 AM
L455	9	L454 AND (navigation OR navigation$1gesture).clm. AND (boundary OR edge).clm.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 11:50 AM
L456	135	L454 AND (protect$3).clm.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 12:54 PM
L457	1	"20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:29 PM
L458	14418	(unlock$3 OR un$1lock$3) WITH (touch OR gesture OR swipe OR flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:40 PM
L459	4133	L458 AND ((touch OR gesture OR swipe OR flick) WITH (sequence OR sequential))	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:40 PM
L460	513	L458 WITH ((touch OR gesture OR swipe OR flick) WITH (sequence OR sequential))	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:41 PM
L461	1990	(protected OR blocked) WITH (state OR status) WITH (GUI OR interface)	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/04/22 11:08 PM
L462	67	L461 AND (unlock$3 WITH "after")	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/04/22 11:08 PM
L463	1	"20160188181".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/01 12:48 PM
L466	1	"13567004" AND (protect$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/06 01:33 PM
L467	1	"20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/06 01:37 PM
L468	15	(swipe OR flick) WITH (context sensitive)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/06 04:46 PM
L469	1674	(gesture) WITH (second WITH sequence)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:55 PM
L470	552	L469 AND (protect$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:55 PM
L471	14	L469 WITH (protect$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:55 PM
L472	81	L469 AND ((gesture OR input) WITH (protect$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:56 PM
L473	4	"10656757"	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/06/08 09:32 PM

L474	24	N436	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/06/08 10:10 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N93	3480	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N94	4153	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N95	9279	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N96	7394	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N99	0	(when near slide gesture).clm.	(USPAT)	ADJ	ON	ON	2019/01/03 07:53 AM
N100	21	(slide gesture WITH second).clm.	(USPAT)	ADJ	ON	ON	2019/01/03 07:53 AM
N103	1	((slide WITH gesture) WITH (pressure) WITH menu).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:45 PM
N104	3821	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N105	4491	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N106	10010	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N107	7926	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N108	19968	N104 or N105 or N106 or N107	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N109	3565	N108 AND (slide or gesture).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:51 PM
N110	203	N109 AND (pressure).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:51 PM
N145	4932	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N146	5592	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N147	12545	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N148	9558	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N149	24442	N145 or N146 or N147 or N148	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N150	39	N149 AND (inversely).clm.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N151	0	"6323846".pn. AND (invers$2)	(USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM

N288	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N289	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N290	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N291	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N292	0	(when near slide gesture).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N293	27	(slide gesture WITH second).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N294	4	((slide WITH gesture) WITH (pressure) WITH menu).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N295	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N296	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N297	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N298	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N299	25236	N295 or N296 or N297 or N298	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N300	4516	N299 AND (slide or gesture).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N301	269	N300 AND (pressure).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N302	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N303	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N304	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N305	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N306	25236	N302 or N303 or N304 or N305	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N307	39	N306 AND (inversely).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N308	0	"6323846".pn. AND (invers$2)	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N409	1	(US-6323846-$).did.	(USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
N411	4302	g06f3/0416.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N412	6160	g06f3/016.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N413	9420	g06f3/0412.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13

							02:14 PM
N414	874	g06f3/0414.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N415	4823	g06f3/044.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N416	2164	g06f3/045.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N417	11818	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N418	2176	g06f2203/04104.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N419	31615	N411 or N412 or N413 or N414 or N415 or N416 or N417 or N418	(USPAT)	ADJ	ON	ON	2021/03/13 02:33 PM
N420	88	N419 AND ((protect or protected or lock or locked) NEAR (mode or feature or setting)).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 02:34 PM
N421	1	"10,656,753".pn.	(USPAT)	ADJ	ON	ON	2021/03/13 06:18 PM
N422	4302	g06f3/0416.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N423	6160	g06f3/016.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N424	9420	g06f3/0412.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N425	874	g06f3/0414.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
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N427	2164	g06f3/045.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N428	11818	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N429	2176	g06f2203/04104.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N430	31615	N422 or N423 or N424 or N425 or N426 or N427 or N428 or N429	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N431	16	N430 AND ((determin$3 WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N432	35	N430 AND (((determin$3 or detect$3) WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 06:33 PM
N433	135	L454 AND	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31

		(protect$3).clm.					12:54 PM
N434	39	L4 AND (blur$4).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/31 06:38 PM
N435	1	"8713458".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/31 06:52 PM
N436	24	L4 AND (blur$4 WITH (magnitude OR pressure)).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/31 07:05 PM
N437	2	"20110273388".pn. OR "20120256866".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/31 07:23 PM

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	Application Number	17206107
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	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-09
Name/Print	Patrick Caldwell	Registration Number	44580

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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**06/09/2023 04:24:47 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62242544	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

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SMITH070AT_1_IDS_20230609_vF.pdf	6	Information Disclosure Statement (IDS) Form (SB08)	1253 KB

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-08
Name/Print	Patrick Caldwell	Registration Number	44580

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**06/08/2023 11:23:21 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62236404	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 41

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Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

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	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

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The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-06
Name/Print	Patrick Caldwell	Registration Number	44580

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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**06/06/2023 10:45:19 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62221064	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
SMITH070AT_1_IDS_20230606_1_OF_2_vF.pdf	8	Information Disclosure Statement (IDS) Form (SB08)	1257 KB
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SMITH070AT_1_IDS_20230606_1_OF_2_vF.pdf	B64F396B731DDAB75356E30BAC2CE65498F3005410A01EF15EB6FF848C457F4F32FDAF58070FE9B43F267E2F836A2AD388

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Doc code: IDS
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PTO/SB/08a (01-22)
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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-06
Name/Print	Patrick Caldwell	Registration Number	44580

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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**06/02/2023 11:41:48 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62204022	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 69

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
N8_US_Preorders.pdf	2	Non Patent Literature	252 KB
N8_OfficialLaunch.pdf	5	Non Patent Literature	662 KB
N8-00_devicedetails.pdf	4	Non Patent Literature	627 KB
N8_Teardown.pdf	11	Non Patent Literature	1158 KB
N9_UserGuide.pdf	116	Non Patent Literature	2865 KB
N800_UserGuide2-1.pdf	130	Non Patent Literature	3400 KB
N8_Review.pdf	7	Non Patent Literature	4341 KB

N800_UserGuide1-1.pdf	123	Non Patent Literature	3116 KB
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NokiaN8_Belle_111.pdf	1	Non Patent Literature	194 KB
NokiaN8_Review.pdf	1	Non Patent Literature	175 KB
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Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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S5e_Will_Launch.pdf	BD3A2D5363C63C44A3ACB5242ADD7C5CE911BA04019C101C479693357DABA8A37C7CB3D0C91C4C4E29C19AFB1075382B5E3BD2C8B2F2BF1695EA501566175DDA
S5e_Manual-WiFi.pdf	D8D4626A8C96E4CCAC018782F0FAB2D22C75C14584E48D57F71D88F87FA2743B70343ED02B9AC75CB743D56746D079D7066C0BCF17CD3900C2B4C69757FEEF8C
SMN930F+D_Manual.pdf	1A96EDC4D1E237A7E6B7AF493E8D24AADE4BC043993A4E9BC2F5C570AA6F7F657DB89A35CAB13C849518CD6AE701BD180B2E3F0CAA3897A57E8DDF686F0C3AEC
S5e_Manual-Unlocked.pdf	A7C10CAF8FCD842111FF6A702A9F1C51DCE24B1491B8C76EF54B24BD72BDCC446D540C52C43E97F5EC1DD6C006D97C183B7178A9734C1BF9690EB3EF492B578B
SM-N9500_Manual.pdf	ADAC5407B8D8A322CB8865A90906D6581E4C598FFBA28EFAD806673584074787B2BC4ACDA01F21738A3BCCBAADF87ED4A318ED569B452E04A5D18E20670DD4E
Symbian_Anna_Update.pdf	BED6EADE08B859A6AA451399F9E3A1BB2C276B5B4842E0921D2B490A4E42D70B47C70EA7C88CA27CE5A2B68F57134734A36856DE97E2C6FE0D70EF32A0B8E58B
Symbian_Belle_NokiaN8.pdf	B2DE68B4CF2C921C5DA80B8E620F591D8FC5C8026170FE6ABF51CBEB333444FD1CF9E1075F29D39A724C6942C8BFADDFEDE4AFAE707552D5C7C72DDA7721059B
SwipePad_Quick-Launch.pdf	693DA3F77C17A9110DA2603D48F1EB4907A5E042CEBE91D0838B9280192C1325899C3C28F5386171BA1B0B8CF56B2C7D8CB9B30248CB6C53591F6ED273E3F0F0
SurvivalGuide.pdf	C999D3C377A3E34DE6FE10CDC7FA46B2BB241722D1446BDB475340FFAEA813315356A595B6951BC86F1BFD7AEA331E6E3235D309865A0A0A1431946FE1578AEF
Windows_StartMenu_Evo.pdf	C8CF4AC133A44F5F5F0C255B1F61CDAA442DC1272C457D162E84C999FC1FED967C283E4F4DE934C4DAD6A2281DBAF17A6524F79280E2EDEE0E2EAB17AE16B491

Wilson_Pressure.pdf	7F9A530994A2DA61A48EBF552AD7320AA48D3873C479CDB79 91FDD073EF2E16A12C26C19F5145EAD2B220FFDD12D91CCB A0531D699CA76737357BBE57743FAD7
Symbian_Anna_Roll.pdf	7F81FB2682A4E1C46B3BACB4F82D8901E0B4D72336787A27D B309F23068AF1180BD1AF236069B1B422E5ED00BABA40A68F EB2F6FE1F8FC70673DB845F9176BDA
Symbian_Belle_showcased.pdf	54781A742E7AA1CDDA62A8173DF8965EC7641515FEBE5E589 37F16C325BFE3322B09D4C837C45F1189DEB695F2BEE523D7 CB81054139EF056CDCA7AC2997D08D

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	06/02/2023 11:25:10 PM ET	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62204017	AUTHORIZED BY	-
CUSTOMER #	92045	FILING DATE	03/18/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Michael S Smith

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0581	E202362N25497225	Patrick Caldwell

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
			TOTAL AMOUNT:	$170.00

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TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
17206107	03/18/2021	Michael Smith	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

☑ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

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Owner	Percent interest
SMITH INTERFACE TECHNOLOGIES, LLC	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date

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10656757
10642413
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- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Terminal disclaimer fee under 37 CFR 1.20(d) included with Electronic Terminal Disclaimer request.

Applicant claims the following entity status:
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I hereby declare that all statements made herein of my own knowledge are true and that all statemnts made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/Patrick Caldwell/	Patrick Caldwell	44580

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* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.

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APPROVAL LETTER

APPLICATION #	FILING DATE	APPLICANT/PATENT UNDER REEXAMINATION
17/206,107	03/18/2021	Michael Smith

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Electronic terminal disclaimer filed on 06/02/2023

☑ Approved

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Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**06/02/2023 11:25:10 PM ET**	**SMITH070AT_1**

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PATENT CENTER #	62204017	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	56 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic-Approved	19 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	1EB1CCDE2AC3AA8B375E0F029D82B0E1FB80A9CADE5F9479 408C8ECC16F85D5C1BC71AE1D6EA26288D90FFC29FAF3697

	D7C117EB5810B88BC686D64D240C8BD5
grantLetter.pdf	96D87081721551D56D56729E5A1EB1AA8F66E4034BEF07080C F0A0B62E9B2763F43FF2979F7EF5EC21505FE8844E5E9EF0F8 BA7092FAA8C467AA0956755333CB

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PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9348504	B2	2016-05-24	Kwak et al.	
	2	9367205	B2	2016-06-14	Hinckley et al.	
	3	9407964	B2	2016-08-02	Somasundaram et al.	
	4	9519418	B2	2016-12-13	Tuli	
	5	9542202	B2	2017-01-10	Ording et al.	
	6	9626094	B2	2017-04-18	Fujisawa et al.	
	7	9639265	B2	2017-05-02	Peterson et al.	
	8	9652145	B2	2017-05-16	Cho et al.	

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	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	9	9658865	B2	2017-05-23	Kim et al.	
	10	9716825	B1	2017-07-25	Manzari et al.	
	11	9746995	B2	2017-08-29	Kotler et al.	
	12	9753630	B1	2017-09-05	Kim et al.	
	13	9762757	B2	2017-09-12	Kim	
	14	9785305	B2	2017-10-10	Ruiz et al.	
	15	9785341	B2	2017-10-10	Stallings et al.	
	16	9836749	B1	2017-12-05	Bowman	
	17	9891811	B2	2018-02-13	Federighi et al.	
	18	9979890	B2	2018-05-22	Bernstein et al.	
	19	9983777	B2	2018-05-29	KIM et al.	

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	1	HTC Droid Incredible or Verizon Wireless Review ("Tiger Direct")	
	2	HTC Droid Incredible Survival Guide ("Survival Guide")	
	3	Introducing Symbian^3: Email on the Nokia N8, avail at https://www.youtube.com/watch?v=q_3vpxhxBzY.	
	4	iOS 13 Beta 1 "3D Touch" (Haptic Touch) demo on iPhone SE, avail at https://www.youtube.com/shorts/W6MEoU_ZKeY.	

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	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	5	iPad (5th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP751?locale=en_US.	
	6	iPad (6th Gen.) Technical Specifications, avail at https://support.apple.com/kb/sp774?locale=en_US.	
	7	iPad (7th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP807?locale=en_US.	
	8	iPad Air (3rd Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP787?locale=en_US.	
	9	iPad Mini (5th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP788?locale=en_US.	
	10	iPad Pro 11- inch (1st Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP784?locale=en_US.	
	11	iPad User Guide for iOS 4.3 Software, avail at https://manuals.info.apple.com/MANUALS/1000/MA1569/en_US/ipad_2_user_guide.pdf.	
	12	iPhone 11 Pro Max Technical Specifications, avail at https://support.apple.com/kb/SP806?locale=en_US.	
	13	iPhone 11 Pro Technical Specifications, avail at https://support.apple.com/kb/SP805?locale=en_US.	
	14	iPhone 11 Technical Specifications, avail at https://support.apple.com/kb/SP804?locale=en_US.	
	15	iPhone 4 Finger Tips Control Guide, avail at https://www.yumpu.com/en/document/view/4575775/iphone-4-finger-tips-support-apple.	

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	16	iPhone 6s Technical Specifications, avail at https://support.apple.com/kb/sp726?locale=en_US.	
	17	iPhone 7 Plus Technical Specifications, avail at https://support.apple.com/kb/SP744?locale=en_US.	
	18	iPhone 7 Technical Specifications, avail at https://support.apple.com/kb/SP743?locale=en_US.	
	19	iPhone 8 and iPhone 8 Plus: A new generation of iPhone, avail at https://www.apple.com/newsroom/2017/09/iphone-8-and-iphone-8-plus-a-new-generation-of-iphone/.	
	20	iPhone 8 Plus Camera Tips, Tricks and Features, avail at https://www.youtube.com/watch?v=FHX7-pCYdlQ.	
	21	iPhone 8 Plus Technical Specifications, avail at https://support.apple.com/kb/sp768?locale=en_US.	
	22	iPhone 8 Technical Specifications, avail at https://support.apple.com/kb/sp767?locale=en_US.	
	23	iPhone iOS 12 User Guide: Learn how to take your best shot	
	24	iPhone iOS Version 11.4 User Guide, avail at https://books.apple.com/us/book/iphone-user-guide-for-ios-11-4/id1263310224.	
	25	iPhone iOS Version 12.3 User Guide, avail at https://books.apple.com/us/book/iphone-user-guide-for-ios-12-3/id1420662672.	
	26	iPhone iOS Version 4.2 User Guide, avail at https://www.devicemanuals.eu/iphone-4-user-guide-for-ios-4-2-and-4-3-software/503/.	

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	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	27	iPhone iOS Version 7.1 User Guide, avail at https://manuals.info.apple.com/MANUALS/1000/MA1681/en_US/iphone_ios7_user_guide.pdf.	
	28	iPhone SE Technical Specifications, avail at https://www.apple.com/iphone-se/specs/.	
	29	iPhone User Guide	
	30	iPhone X Technical Specifications, avail at https://support.apple.com/kb/sp770?locale=en_US.	
	31	iPhone XR Technical Specifications, avail at https://support.apple.com/kb/SP781?locale=en_US.	
	32	iPhone XS Max Technical Specifications, avail at https://support.apple.com/kb/SP780?locale=en_US.	
	33	iPhone XS Technical Specifications, avail at https://support.apple.com/kb/SP779?locale=en_US.	
	34	iPod Touch (7th Gen.) Technical Specifications, avail at https://support.apple.com/kb/SP796?locale=en_US.	
	35	It's a DROID. It's Incredible. It's Coming to Verizon Wireless ("MediaSeed")	
	36	Jon Froehlich, Jacob O. Wobbrock, and Shaun K. Kane. 2007. Barrier pointing: using physical edges to assist target acquisition on mobile device touch screens. In Proceedings of the 9th international ACM SIGACCESS conference on Computers and accessibility (Assets '07). Association for Computing Machinery, New York, NY, USA, 19–26. https://doi.org/10.1145/1296843.1296849	
	37	Jun Rekimoto and Carsten Schwesig. 2006. PreSenseII: bi-directional touch and pressure sensing interactions with tactile feedback. In CHI '06 Extended Abstracts on Human Factors in Computing Systems (CHI EA '06). Association for Computing Machinery, New York, NY, USA, 1253–1258. https://doi.org/10.1145/1125451.1125685	

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	Attorney Docket Number	SMITH070AT_1

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	43	Li, Y., 2009. Beyond pinch and flick: Enriching mobile gesture interaction. Computer, 42(12), pp.87-89.	
	44	Neonode N1 Guide, avail at https://www.manualslib.com/manual/652544/Neonode-N1.html#product-N1	
	45	Neonode N1 User Manual, avail at https://www.manualslib.com/manual/2583100/Neonode-N1.html#product-N1.	
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	49	Nokia 6.1 User Guide, avail at https://www.nokia.com/phones/en_int/support/api/pdf/nokia-6-1-user-guide?locale=en.	
	50	Nokia Belle update now avail for N8, C7, E6, X7 and C6-01 avail at http://www.allaboutsymbian.com/news/item/14188_The_Nokia_Belle_update_roll_ou.php.	

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Name/Print	Patrick Caldwell	Registration Number	44580

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	1	Nokia N8 Belle 111.030.0609, avail at https://www.youtube.com/watch?v=3eaGUdtMgE4.	
	2	Nokia N8 Data Sheet, avail at https://st.ilsole24ore.com/pdf2010/SoleOnLine5/_Oggetti_Correlati/Documenti/Tecnologie/2010/09/Nokia%20N8%20data%20sheet_sales%20start.pdf?uuid=19bb6116-bff9-11df-a542-5420bdacca78.	
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	10	Nokia N8-00 Data Sheet	
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	12	Nokia N8-00 User Guide Issue 1.1 avail at http://i.smartphone.ua/docs/instr/instr_nokia-n8_eng.pdf.	
	13	Nokia N8-00 User Guide Issue 2.1 avail at https://www.manualslib.com/manual/505169/Nokia-N8-00.html#manual	
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	25	Pook, Stuart & Lecolinet, Eric & Vaysseix, Guy & Barillot, Emmanuel. (2000). Control menus: Excecution and control in a single interactor. 263-264. 10.1145/633292.633446.	
	26	Preview of Email on the Nokia N8, avail at https://www.youtube.com/watch?v=CnsMW44dEpM.	
	27	R. Kosara, S. Miksch and H. Hauser, "Focus+context taken literally," in IEEE Computer Graphics and Applications, vol. 22, no. 1, pp. 22-29, Jan.-Feb. 2002, doi: 10.1109/38.974515.	
	28	R. Kosara, S. Miksch and H. Hauser, "Semantic depth of field," IEEE Symposium on Information Visualization, 2001. INFOVIS 2001., San Diego, CA, USA, 2001, pp. 97-104, doi: 10.1109/INFVIS.2001.963286.	
	29	R. Nero. 2010. Stacked User Inputs: Combining digital and physical layers of interaction for "same-space-multiplexed" input. Malmo University.	
	30	Ramos, Gonzalo & Cockburn, Andy & Balakrishnan, Ravin & Beaudouin-Lafon, Michel. (2007). Pointing lenses: facilitating stylus input through visual-and motor-space magnification. 757-766. 10.1145/1240624.1240741.	
	31	Ronald Ecker, Verena Broy, Andreas Butz, and Alexander De Luca. 2009. PieTouch: a direct touch gesture interface for interacting with in-vehicle information systems. In Proceedings of the 11th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '09). Association for Computing Machinery, New York, NY, USA, Article 22, 1–10. https://doi.org/10.1145/1613858.1613887	
	32	S5e Quick Start Manual [Wi-Fi], avail at https://downloadcenter.samsung.com/content/UM/201903/20190330043250327/WIF_SM-T720_Galaxy_Tab_S5e_EN_IBG_P_9.0_031819_Final.pdf.	
	33	Samsung Announces the Availability of the Galaxy Tab S5e and the Galaxy Tab A 10.1, avail at https://news.samsung.com/us/galaxy-tab-s5e-galaxy-tab-10-1-galaxy-view2-availability-2019/.	

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	34	Samsung Galaxy Note 7 User Manual (Sprint), avail at https://allaboutgalaxynote.com/note_7_manual/Sprint_Samsung_galaxy_note_7_user_manual_Sprint_SM_N930P_English_language.pdf.	
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	38	Samsung Galaxy Note 8 User Manual (AT&T), avail at https://www.att.com/ecms/dam/att/devicesupport/5000-5499/5176/Samsung-Galaxy-Note8-N950U.pdf.	
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See attached certification statement.

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Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-02
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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**06/02/2023 08:27:57 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62203706	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 100

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
SMITH070AT_1_IDS_Coversheet_vF_20230602.pdf	2	Transmittal Letter	40 KB
SMITH070AT_1_IDS_20230602_3_OF_4_vF.pdf	8	Information Disclosure Statement (IDS) Form (SB08)	1255 KB
SMITH070AT_1_IDS_20230602_4_OF_4_vF.pdf	6	Information Disclosure Statement (IDS) Form (SB08)	1253 KB
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(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	Antonio J XAVIER
Attorney Docket Number	SMITH070AT_1

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	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
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	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	1	Shaun K. Kane, Jacob O. Wobbrock, and Richard E. Ladner. 2011. Usable gestures for blind people: understanding preference and performance. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11). Association for Computing Machinery, New York, NY, USA, 413–422. https://doi.org/10.1145/1978942.1979001	
	2	Specifications Apple Newton MessagePad	
	3	SwipePad - A Stylish Quick-Launch Utility For Your Android Phone, avail at https://www.makeuseof.com/tag/swipepad-stylish-quicklaunch-utility-android-phone/.	
	4	Symbian Anna Roll Out Has Started for the Nokia N8, C7, E7 and C6-01 avail at http://www.allaboutsymbian.com/news/item/13196_Symbian_Anna_now_avail_for.php#:~:text=Symbian%20Anna%20roll%20out%20has,C7%2C%20E7%20and%20C6-01.	
	5	Symbian Anna Update Now avail for Nokia N8, C7, C6-01, E7, avail at https://www.youtube.com/watch?v=SEC5muBTXNY.	
	6	Symbian Belle on the Nokia N8, avail at https://www.youtube.com/watch?v=IXacVnQ4t7E.	
	7	Symbian Belle Showcased on a Nokia N8 in a Lengthy Video avail at https://www.phonearena.com/news/Symbian-Belle-showcased-on-a-Nokia-N8-in-a-lengthy-video_id20834.	
	8	The iPad arrives: our first look at Apple's revolutionary new tablet	
	9	U.S. Patent Provisional Application No. 60879253	
	10	U.S. Patent Provisional Application No. 61056825	
	11	U.S. Patent Provisional Application No. 61259985	

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	12	U.S. Patent Provisional Application No. 61304048	
	13	U.S. Patent Provisional Application No. 61321869	
	14	U.S. Patent Provisional Application No. 61386302	
	15	U.S. Patent Provisional Application No. 61415179	
	16	U.S. Patent Provisional Application No. 61441491	
	17	U.S. Patent Provisional Application No. 61458326	
	18	Vincent Levesque, Louise Oram, Karon MacLean, Andy Cockburn, Nicholas D. Marchuk, Dan Johnson, J. Edward Colgate, and Michael A. Peshkin. 2011. Enhancing physicality in touch interaction with programmable friction. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11). Association for Computing Machinery, New York, NY, USA, 2481–2490. https://doi.org/10.1145/1978942.1979306	
	19	Volker Roth and Thea Turner. 2009. Bezel swipe: conflict-free scrolling and multiple selection on mobile touch screen devices. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09). Association for Computing Machinery, New York, NY, USA, 1523–1526. https://doi.org/10.1145/1518701.1518933	
	20	Walmart Cell Phones	
	21	Windows Start Menu Evolution! (95 - 11 + Betas)!, avail at https://www.youtube.com/watch?v=eb7Ct58NSc4.	

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	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	

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	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-06-02
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: MICHAEL S. SMITH Application No.: 17/206,107 File Date: 03/18/2021 Title: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	Confirmation No.: 7030 Examiner: Antonio J. XAVIER Art Unit: 2623 Docket No.: SMITH070AT_1 Date: 06/02/2023

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56 AND 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

The reference(s) listed in the attached PTO Form SB08, cop(ies) of which is attached (when necessary), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97. The Examiner is requested to make the reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art. Additionally, one or more related patents are the subject of litigation (EDTX 2:22-cv-00290). Invalidity contentions have been served in this case, and prior art cited therein has been disclosed herewith.

This Information Disclosure Statement is believed to be filed within three months of the filing date of a national application other than a continued prosecution application, within three months of the date of entry of the national stage in an international application, before the mailing of a first Office action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement.

Respectfully submitted,

Dated: 02 Jun 2023

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Commissioner for Patents
United States Patent and Trademark Office
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APPROVAL LETTER

APPLICATION #	FILING DATE	APPLICANT/PATENT UNDER REEXAMINATION
17/206,107	03/18/2021	Michael Smith

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Electronic terminal disclaimer filed on 05/25/2023

☑ Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**05/25/2023 10:00:00 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62159510	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	48 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic-Approved	19 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	8A1F5D901C899203B9BAD70D7E50EB4693B02FE59555BA57D B4BD23C313B939735BB14CE11F110A7BE46E2A127B73AA6E1

	13FC748D1A2E035400743497F90DCF
grantLetter.pdf	ACEC4C5D4C8A5EB81CAC4908FFDFB3D3791C480F91162FF2 B11C3D64DE7A3A286A48024618C5217CE5032832736BDB8C3 D6112B339EC10B0EDCED36E88BC7155

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
17206107	03/18/2021	Michael Smith	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

☑ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☑ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent interest
P4TENTS1 LLC	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent

granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

Patent #
10656754

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.
In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Terminal disclaimer fee under 37 CFR 1.20(d) included with Electronic Terminal Disclaimer request.

Applicant claims the following entity status:
Small

I hereby declare that all statements made herein of my own knowledge are true and that all statemnts made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/Patrick Caldwell/	Patrick Caldwell	44580

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	05/25/2023 10:00:00 PM ET	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62159510	AUTHORIZED BY	-
CUSTOMER #	92045	FILING DATE	03/18/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Michael S Smith

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0581	E20235OM00226606	Patrick Caldwell

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
			TOTAL AMOUNT:	$170.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	17/206,107	Filing Date	2021-03-18	Docket Number (if applicable)	SMITH070AT_1	Art Unit	2623
First Named Inventor	Michael S Smith			Examiner Name	Antonio J XAVIER		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 504964

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-05-25
Name	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	05/25/2023 09:57:35 PM ET	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62159503	AUTHORIZED BY	-
CUSTOMER #	92045	FILING DATE	03/18/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Michael S Smith

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0581	E20235OL58096271	Patrick Caldwell

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2202	EACH CLAIM IN EXCESS OF 20	40.00	2	80.00
2820	REQUEST FOR CONTINUED EXAMINATION (RCE)- 2ND AND SUBSEQUENT REQUEST (SEE 37 CFR 1.114)	800.00	1	800.00
			TOTAL AMOUNT:	$880.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: MICHAEL S. SMITH Application No.: 17/206,107 File Date: 03/18/2021 Title: GESTURE-EQUIPPED TOUCH SCREEN SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT	Confirmation No.: 7030 Examiner: XAVIER, ANTONIO J Art Unit: 2623 Docket No.: SMITH070AT Date: 5/25/2023

AMENDMENT
with
REQUEST FOR CONTINUED EXAMINATION (RCE)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

In response to the Final Office Action mailed 03-16-2023, please consider the following believed to place the claims in condition for allowance.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1.-26. (Cancelled)

27. (New) A device, comprising:

at least one non-transitory memory;

a touch screen; and

one or more processors in communication with the at least one non-transitory memory, and the touch screen, wherein the one or more processors execute instructions in the at least one non-transitory memory, to cause the device to:

display an object and at least one other object;

detect at least part of a gesture on the touch screen; and

during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a distance magnitude of the gesture being detected on the touch screen to thereby move the object on the touch screen, at least a portion of the at least one other object that is not overlapped.

28. (New) The device of claim 27, wherein the device is configured such that:

the object includes a graphic object;

the object is displayed closer to a top edge of the touch screen than a bottom edge of the touch screen;

an aspect of the object other than a location thereof is modified, based on the change in the distance magnitude of the gesture being detected on the touch screen; and

the at least one other object includes a background image.

29. (New) The device of claim 28, wherein the device is configured such that the object is displayed closer to a right edge of the touch screen than a left edge of the touch screen.

30. (New) The device of claim 28, wherein the device is configured such that the at least part of the gesture is detected on the touch screen on the object.

31. (New) The device of claim 28, wherein the device is configured such that, during at least a part of at least an initial portion of the change in the distance magnitude, an entirety of the object is blurred.

32. (New) The device of claim 28, wherein the device is configured such that, during at least a part at least an initial portion of the change in the distance magnitude, an entirety of a virtual display layer in which the object is displayed, is blurred.

33. (New) The device of claim 28, wherein the device is configured such that a magnitude of the blur itself, as opposed to a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude.

34. (New) The device of claim 28, wherein the device is configured such that the graphic object includes a battery icon.

35. (New) The device of claim 28, wherein the device is configured such that the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer.

36. (New) The device of claim 28, wherein the device is configured such that the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer that appears in front of the first virtual layer.

37. (New) The device of claim 28, wherein the device is configured such that the aspect of the object other than the location thereof is modified while the object continues to be displayed,

based on the change in the distance magnitude of the gesture being detected on the touch screen.

38. (New) The device of claim 28, wherein the device is configured such that the aspect of the object includes a size of the object.

39. (New) The device of claim 28, wherein the device is configured such that the aspect of the object includes a size of the object, and another size of the at least one other object is not modified in addition to the blur, when the size of the object is modified.

40. (New) The device of claim 28, wherein the device is configured such that the aspect of the object includes a color of the object.

41. (New) The device of claim 28, wherein the device is configured such that the aspect of the object includes a color of the object, and another color of the at least one other object is not modified in addition to the blur, when the color of the object is modified.

42. (New) The device of claim 28, wherein the device is configured such that the at least one object remains displayed to be modified after the completion of the gesture.

43. (New) The device of claim 28, wherein the device is configured such that the blur is not caused by any overlap of the at least portion of the at least one other object.

44. (New) The device of claim 28, wherein the device is configured such that:

the at least part of the gesture is detected on the touch screen on the object;

during at least a part of an initial change in the distance magnitude, an entirety of the object is blurred; and

the aspect of the object other than the location thereof is modified while the object continues to be displayed, based on the change in the distance magnitude of the gesture being detected on the touch screen on the object.

45. (New) The device of claim 44, wherein the device is configured such that:

a magnitude of the blur itself, as opposed to a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude;

the graphic object includes a battery icon; and

the blurring indicates a movement of the object between a first virtual layer including the at least one other object, and a second virtual layer.

46. (New) The device of claim 45, wherein the device is configured such that:

the object is displayed closer to a right edge of the touch screen than a left edge of the touch screen; and

the aspect of the object includes a size of the object, and another size of the at least one other object is not modified in addition to the blur, when the size of the object is modified.

47. (New) The device of claim 45, wherein the device is configured such that:

the aspect of the object includes a color of the object, and another color of the at least one other object is not modified in addition to the blur, when the color of the object is modified.

48. (New) The device of claim 47, wherein the device is configured such that at least one of:

the object includes a dynamic object;

the other object includes a background image;

the other object includes an anchor object;

the object includes a dynamic object without a corresponding anchor object;

the gesture includes a move gesture;

the gesture includes a multiple contact gesture;

the gesture does not include a multiple contact gesture;

the blur includes a cue;

the blur is feedback for the gesture;

the blur is feedback for the gesture, and the gesture includes a move gesture;

the blur is feedback for the gesture, and the gesture includes only a move gesture;

the blur is feedback for the gesture, and the gesture includes a move gesture of an anchor and move gesture;

the blur includes a modification;

the touch screen includes a touch interface and a display;

the touch screen is a combination of a touch interface and a display;

the touch screen is on a front face of the device;

the touch screen is on a back face of the device;

based on a change in a distance magnitude of the gesture being detected on the touch screen on the object to thereby move the object on the touch screen, the at least portion of the at least one other object that is not overlapped.

the at least portion of the at least one other object that is not overlapped, is not overlapped by any object including the object;

the at least portion of the at least one other object that is not overlapped;

the one or more processors is in direct communication with the at least one non-transitory memory, and the touch screen;

the one or more processors is in indirect communication with the at least one non-transitory memory, and the touch screen;

the one or more processors is in communication, via at least one bus, with the at least one non-transitory memory, and the touch screen;

the at least one non-transitory memory includes a single memory for storing the instructions;

the at least part of the gesture is detected via the touch screen on the object, by an entirety of the gesture being detected via the touch screen on the object;

the at least part of the gesture is detected via the touch screen on the object, by only the part of the gesture being detected via the touch screen on the object;

the at least part of the gesture is detected via the touch screen on the object, by only an initial part of the gesture being detected via the touch screen on the object;

the at least part of the gesture is mutually exclusive of the at least portion of the gesture;

the at least part of the gesture overlaps, only in part, the at least portion of the gesture;

the at least part of the gesture is at least partially the same as the at least portion of the gesture;

the at least part of the gesture is the same as the at least portion of the gesture;

the gesture includes a combination of a touch gesture component and a swipe gesture component;

the gesture includes solely a swipe gesture;

the gesture includes solely a slide gesture;

the magnitude is detected utilizing one or more of a plurality of contact-sensing technologies including a capacitive-based contact sensing technology, a resistive-based contact sensing technology, an optical-based contact sensing technology, or a surface acoustic wave-based contact sensing technology;

the touch screen is a two-dimensional layered user interface;

the touch screen is a single layer user interface that simulates a three-dimensional layered user interface through use of virtual display layers;

the at least part of the gesture on the touch screen on the object is detected, by being detected on a selection boundary that, at least in part, overlaps the object;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen on the object;

the at least part of the gesture is detected via the touch screen on the object by the gesture being detected via the touch screen on the object during an entirety of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the gesture being detected via the touch screen on the object during an entirety of the gesture, by the object moving with movement of the gesture;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen on an area other than the object;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen, by conditionally blurring based on the change in the magnitude of the gesture being detected on the touch screen reaching a threshold magnitude;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen, by increasing based on the change in the magnitude of the gesture being detected on the touch screen;

the blur is based on the change in the magnitude of the gesture being detected on the touch screen, by increasing based on an initiation of the change in the magnitude of the gesture being detected on the touch screen;

the blur is based only on the change in the magnitude of the gesture being detected via the touch screen;

the blur is based on the change in the magnitude of the gesture being detected via the touch screen t, in addition to one or more other factors;

the blur is based on the change in the magnitude of the gesture being detected via the touch screen on the object, by being based on a function of the change in the magnitude of the gesture being detected via the touch screen on the object;

the at least part of the gesture on the touch screen is detected on an entirety of the object;

the at least part of the gesture on the touch screen is detected on at least a portion of the object;

the at least part of the gesture on the touch screen on the object is detected, by being detected within a selection boundary that, at least in part, overlaps the object;

the at least part of the gesture on the touch screen on the object is detected, by being detected within a predetermined distance from the object;

the magnitude on the object is detected, by being detected within a predetermined distance from the object to account for issues associated with human finger touches on the touch screen;

the change in the magnitude of the gesture being detected via the touch screen, includes a change from a zero distance magnitude to a non-zero distance magnitude;

the change in the magnitude of the gesture being detected via the touch screen, includes a change from a first non-zero distance magnitude to a second non-zero distance magnitude;

the color includes black;

the color does not include black;

the color includes white;

the color does not include white;

the color includes an absence of color;

the color does not include an absence of color;

the at least the part of the at least the initial portion of the change, includes a beginning of the gesture;

the at least the part of the at least the initial portion of the change, includes a part of the initial portion that follows the beginning of the gesture;

the at least portion of the at least one other object remains blurred after the completion of the gesture;

the at least portion of the at least one other object is no longer blurred after detection of a cessation of the gesture;

the at least portion of the at least one other object is blurred during detection of only the portion of the gesture;

the at least portion of the at least one other object is blurred during an entirety of the detection of the gesture;

the at least portion of the at least one other object is part of an interface;

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object only at a beginning of the gesture;

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object during an entirety of the gesture; or

the at least part of the gesture is detected via the touch screen on the object by the at least part of the gesture being detected via the touch screen on the object during an entirety of the gesture.

Remarks:

The claims have been clarified. It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Still yet, nothing in this reply should be construed as intention to concede any issue with regard to any claim, except as specifically stated in this reply. Finally, it should be noted that no claims are intended to be construed under 35 U.S.C. 112, paragraph 6.

Respectfully submitted,

Dated: 25 May 2023

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UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**05/25/2023 09:57:35 PM ET**	**SMITH070AT_1**

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	62159503	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 4

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
SMITH070AT_1_ROA_withRCE_vF_20230525.pdf		11	-	78 KB
SMITH070AT_1_ROA_withRCE_vF_20230525-AMSB.pdf	(1-1)	1	Amendment Submitted/Entered with Filing of Continued Prosecution Application (CPA)/Request for Continued Examination(RCE)	37 KB
SMITH070AT_1_ROA_withRCE_vF_20230525-CLM.pdf	(2-10)	9	Claims	59 KB
SMITH070AT_1_ROA_with	(11-11)	1	Amendment Submitted/Entered	49 KB

RCE_vF_20230525-AMSB.pdf		with Filing of Continued Prosecution Application (CPA)/Request for Continued Examination(RCE)	
SMITH070AT_1_RCE_20230525_vF.pdf	3	Request for Continued Examination (RCE)	1642 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
SMITH070AT_1_ROA_withRCE_vF_20230525.pdf	5B6354591C4870AB544B956FF42D3B6F42D35988B1FEDAA0368A2C74B0F340C4876DD4D6138068C81E46DC3680DCE4BBF052C76585891C11C07B8684CC8BF649
SMITH070AT_1_ROA_withRCE_vF_20230525-AMSB.pdf	17E1C8B5FE7C48E2E88E55392DF2E0983E976D6873CA0093DC5D15496AF92D61F8A41110FF3596ECC48105EBFAED29416AA917D47E2770B05F551F1B4D24F6E6
SMITH070AT_1_ROA_withRCE_vF_20230525-CLM.pdf	48231123343D5F4E224BFF19D04786A8440E224FFFD30F7E01314F2D6B504F49BF0B48131FDA5C8FDEDBB2F7A6A8CB08B0F28B6DBE3F375BDE0B85FEE0111ECF
SMITH070AT_1_ROA_withRCE_vF_20230525-AMSB.pdf	943E779A095A176D2FF7C8F053F995A8F5EACD8F469BD43BA073E6F0502CB8EEF8C5B1F8BE3A00E241BE9B608C17363F1D5249E80F61CA7F972327BD544EEA52
SMITH070AT_1_RCE_20230525_vF.pdf	56F42D53D9569600D2D9E41998A449F473405227B9C30C2B5DACB4929FA95BB17563EE6AF53CA0975739BE9408CC478B05EB731DC3A075A7253FF56FEAF62E54

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/206,107	Filing Date 03/18/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	05/25/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 22	Minus	** 20	= 2		x $40 =	80
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0		x $192 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	80

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/KIMBERLY N PANNELL/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

92045 7590 03/16/2023

The Caldwell Firm, LLC
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EXAMINER	
XAVIER, ANTONIO J	

ART UNIT	PAPER NUMBER
2623	

NOTIFICATION DATE	DELIVERY MODE
03/16/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

caldwelldocketing@gmail.com
eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

Office Action Summary	Application No. 17/206,107	Applicant(s) Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 1/24/23.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1 and 9-26 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1 and 9-26 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/18/21 is/are: a)☐ accepted or b)☑ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☑ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Patent Trial and Appeal Board, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on January 24, 2023 has been entered.

Response to Arguments

3. Applicant's arguments filed January 24, 2023 (hereinafter "Remarks") have been fully considered but they are not persuasive.

On pages 15-20 of the Remarks, Applicant argues the custom gestures of Fig. 33 in combination with the proximity and touch detection of Figure 8 support the claim. Specifically, Applicant argues "proximity criteria may prevent a first input (gesture) from triggering an action (with an associated user interface), while a second input (gesture) does trigger such action" (page 17 of the Remarks). Examiner is not persuaded.

Fig. 8 appears directed to distinguishing between proximity (Fig. 8, item 804) and contact (Fig. 8, item 808) of the same instance of an input. As the input approaches the touch surface it will be recognized first as proximity and then second as a contact.

Examiner notes the disclosure of Fig. 8 does not appear to support the subject matter recited in claims 1, 9 and 26. Specifically, the claims recite "while displaying the first user interface of the first application, detecting a first input by a **first** contact **on** the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met" (emphasis added); and "after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a **second** contact **on** the touch-sensitive surface" (emphasis added).

To clarify, Examiner is interpreting the claim to read on (1) two separate inputs that (2) make full contact on the touch-sensitive surface (enumeration added). The disclosure of Fig. 8 directed to proximity and contact of the same input does not appear to provide the necessary support.

Therefore, Examiner is maintaining his interpretation that the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. Applicant's remaining arguments have been fully considered but they are not persuasive and/or moot in view of the new ground(s) of rejection.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, **detecting a second input** by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and **displaying the respective other user interface on the display**" (see at least **claims 1, 9 and 26** – emphasis added) (see rejection under 35 USC § 112 below for further details) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1 and 9-26 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites “a method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, **detecting a second input** by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and **displaying the respective other user interface on the display**" (emphasis added).

To clarify, Examiner was unable to find support for the specifically claimed second input following a first input during a protected state. Specifically, the second input appears to provide two separate functions: (1) bypassing the protected state; and

(2) changing the display to the same respective other user interface that the first input would in a non-protected state (emphasis added).

Therefore, claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 9 and 26 recite similar language and are rejected for substantially the same reasons, discussed above.

Claims 10-25 are dependent on claim 9 and are rejected for substantially the same reasons, discussed above.

Pertinent Art

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

a. Fig. 3 of Davis (USPN 2017/0111348) and Fig. 5 of Lee (USPN 2011/0260829) teach sequential gestures.

Conclusion

9. All claims are either identical to or patentably indistinct from claims in the application prior to the entry of the submission under 37 CFR 1.114 (that is, restriction would not be proper) and all claims could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTONIO J XAVIER whose telephone number is (571)270-7688. The examiner can normally be reached M-F 530am-2pm PST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an

interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Antonio Xavier/
Primary Examiner, Art Unit 2623

Examiner-Initiated Interview Summary	**Application No.** 17/206,107	**Applicant(s)** Smith, Michael S		
	Examiner ANTONIO J XAVIER	**Art Unit** 2623	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ANTONIO J XAVIER	Primary Examiner	Telephonic
Patrick E. Caldwell (Reg. No.: 44,580)	Attorney of Record	

Date of Interview: 09 March 2023

Issues Discussed:

35 U.S.C. 103

Examiner called to clarify Applicant's interpretation of Fig. 8 and how it supported the claimed subject matter.

Examiner agreed Fig. 8 appeared to include a sequential input action but did not agree the claim was supported.

No agreement was reached

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 17/206,107	Applicant(s)/Patent Under Reexamination Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20170111348-A1	04-2017	Davis; Michael Lawrence	H04B5/0062	1/1
*	B	US-20110260829-A1	10-2011	Lee; Yun Sun	G06F21/31	345/173
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
G06F3/016	09/23/2021	AX
G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

Search Notes		
Search Notes	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
G06F3/016	09/23/2021	AX
G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX
Reviewed patent family	09/23/2021	AX
Inventor	09/23/2021	AX
EAST	09/23/2021	AX
Updated EAST	04/22/2022	AX
Updated EAST	03/11/2023	AX

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	**Art Unit**
	ANTONIO J XAVIER	2623

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/24/2021	04/22/2022	03/11/2023						
	1	✓	✓	✓						
	2	✓	-	-						
	3	✓	-	-						
	4	✓	-	-						
	5	✓	-	-						
	6	✓	-	-						
	7	✓	-	-						
	8	✓	-	-						
	9		✓	✓						
	10		✓	✓						
	11		✓	✓						
	12		✓	✓						
	13		✓	✓						
	14		✓	✓						
	15		✓	✓						
	16		✓	✓						
	17		✓	✓						
	18		✓	✓						
	19		✓	✓						
	20		✓	✓						
	21		✓	✓						
	22		✓	✓						
	23		✓	✓						
	24		✓	✓						
	25		✓	✓						
	26		✓	✓						

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	0	"15719406"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:33 PM
L2	0	"15072351"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:36 PM
L3	2	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:36 PM
L4	3560	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/12 12:40 PM
L5	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L6	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L7	27	L5 or L6	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L8	990	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:25 PM
L9	782	L8 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:26 PM

		short message) or (social network))					
L10	0	L4 AND L9	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:26 PM
L11	0	L4 AND L8	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L12	901	L4 AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L13	508	L12 AND pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L14	36	L13 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L15	244	L4 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L16	133	L4 AND menu AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L17	97	L16 NOT L14	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:41 PM
L18	0	(back$1touch settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/13 12:27 PM
L19	2	(back$1touch near settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/13 12:31 PM
L20	3561	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 09:58 AM
L21	82	L20 AND (touch$3 AND menu AND (social or sharing))	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 09:58 AM
L22	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	(US-PGPUB)	ADJ	ON	ON	2017/12/14 11:30 AM
L23	0	L22 AND ((pressure or magnitude) WITH (touch))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 11:30 AM
L24	0	L22 AND ((pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 11:30 AM
L25	120	(menu) WITH (social media) WITH (shar$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 01:58 PM
L26	73418	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:39 PM
L27	3561	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 06:40 PM
L28	69	L26 AND L27	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:40 PM
L29	1879	touch WITH (pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14

		or magnitude) WITH thresholds					06:59 PM
L30	4	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:59 PM
L31	62	("5745719").URPN.	(USPAT)	ADJ	ON	ON	2017/12/14 07:20 PM
L32	5	"11038590"	(USPAT)	ADJ	ON	ON	2017/12/14 07:21 PM
L33	1	"20060161871".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:22 PM
L34	1	"20060026535".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:24 PM
L35	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L36	57422	(touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L37	5	L35 and L36	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L38	45	(social network or social application) WITH (shar$3 object)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:22 PM
L39	9596	(social network or social application) WITH (post)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L40	2866	L39 AND (SMS and e$1mail)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L41	196	L40 AND (menu WITH GUI)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L42	18	L41 AND (touch WITH (pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:38 PM
L43	37	(GUI or menu) WITH (pressure or magnitude) WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:50 PM
L44	3	"12597684"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:52 PM
L45	581	((context sensitive or context$1sensitive)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/16 04:13 PM

		WITH (icon))					
L46	7	L45 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/16 04:15 PM
L47	13	menu WITH historical usage	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:40 PM
L48	1	"8191015".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:44 PM
L49	1	"20080065991".pn. AND (menu WITH usage)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:44 PM
L50	6827	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:20 PM
L51	6	L50 WITH (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:21 PM
L52	12	L50 SAME (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:22 PM
L53	233	L50 AND (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:39 PM
L54	165	L50 AND (touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 08:34 PM
L55	8887	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:43 PM
L56	10393	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L57	23568	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L58	18904	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L59	46941	L55 or L56 or L57 or L58	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L60	6344	L59 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L61	2168	L60 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L62	141649	(pressure WITH (magnitude or threshold))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:45 PM
L63	465	L62 AND L61	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:45 PM
L64	30	L63 AND L50	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:47 PM
L65	100	(slide WITH gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:32 PM
L66	3	L65 AND (slide WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:39 PM
L67	6	L65 AND (slide SAME pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:41 PM
L68	0	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20

							05:52 PM
L69	3580	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2018/01/20 05:52 PM
L70	11	L69 AND (intermediate state)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:52 PM
L71	19	L69 AND (gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:54 PM
L72	9007	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L73	10547	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L74	23888	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L75	19105	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L76	47534	(L72 or L73 or L74 or L75)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L77	843	L76 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:57 PM
L78	15	L76 AND (intermediate WITH (pressure or signal or state) WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:57 PM
L79	208	("20010005692"|"20010043291"|"20020002629"|"20020005111"|"20020008691"|"20020033919"|"20020045854"|"20020085952"|"20020116952"|"20020116959"|"20020118180"|"20020130832"|"20020180763"|"20030117408"|"20030123328"|"20030147041"|"20030151589"|"20030217972"|"20030232192"|"20030235452"|"20040084372"|"20040108995"|"20040109788"|"20040121855"|"2004019150 9"|"20040207542"|"20040212598"|"20040239624"|"20040263488"|"20050045540"|"20050099403"|"20050231461"|"20050242034"|"20050264521"|"20050280746"|"20060001654"|"20060001800"|"20060033701"|"20060077186"|"20060107719"|"20060138983"|"20060146032"|"20060167400"|"2006017908	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:23 PM

		8"|"20060195064"|"200 60197736"|"200601977 37"|"20060209039"|"20 060238495"|"20060260 711"|"20060262099"|"2 0060284874"|"2007000 8064"|"20070035526"|" 20070040814"|"200700 70047"|"20070085837"| "20070103454"|"20070 137901"|"20070146313 "|"20070148371"|"2007 0153215"|"2007017690 2"|"20070182864"|"200 70195029"|"200702294 77"|"20070237170"|"20 070262967"|"20080007 675"|"20080018613"|"2 0080024459"|"2008002 4712"|"20080060854"|" 20080062169"|"200800 68343"|"20080094367"| "20080100584"|"20080 105600"|"20080130910 "|"20080136790"|"2008 0158171"|"2008020442 7"|"20080210843"|"200 80211786"|"200802151 92"|"20080252607"|"20 080252616"|"20080259 046"|"20080295839"|"2 0080304431"|"2009000 2312"|"20090022256"|" 20090036176"|"200900 46110"|"20090051659"| "20090066660"|"20090 073138"|"20090086420 "|"20090091536"|"2009 0143652"|"2009015815 2"|"20090160781"|"200 90213066"|"200902250 53"|"20090271731"|"20 090289912"|"20090295 747"|"20100005390"|"2 0100017872"|"2010002 0039"|"20100026640"|" 20100035656"|"201000 45612"|"20100053103"| "20100053532"|"20100 077829"|"20100079398 "|"20100085500"|"2010 0097347"|"2010013442 9"|"20100134448"|"201 00149101"|"201001491 24"|"20100164884"|"20 100188365"|"20100194 709"|"20100201651"|"2 0100206560"|"2010020					

		7900"|"20100214499"|"20100222735"|"20100225608"|"20100259490"|"20100277432"|"20110001706"|"20110007023"|"20110012921"|"20110025969"|"20110037726"|"20110044064"|"20110050591"|"20110050592"|"20110050593"|"20110050594"|"20110050608"|"20110051334"|"20110063248"|"20110088416"|"20110102336"|"20110102347"|"20110105446"|"20110109573"|"20110115738"|"20110118029"|"20110122084"|"20110152739"|"20110169775"|"20110175845"|"20110181552"|"20110210942"|"20110210943"|"20110227836"|"20110227877"|"20110239110"|"20110248941"|"20110254793"|"20110260994"|"20110273394"|"20110273396"|"20110291953"|"20120007821"|"20120013566"|"20120019448"|"20120023450"|"20120032876"|"20120034954"|"20120044172"|"20120056846"|"20120086670"|"20120105367"|"20120105370"|"20120109037"|"20120154328"|"20120162087"|"20120182249"|"20120194461"|"20120194462"|"20120223900"|"20120229403"|"20120229404"|"20120229405"|"20120231853"|"20120240044"|"20120242610"|"20120244348"|"20120254747"|"20120266072"|"20120274662"|"20120293449"|"20120306764"|"20120306765"|"20120306766"|"20120313888"|"20130002610"|"20130009869"|"20130021285"|"20130021295"|"20130027350").PN.					
L80	234	("20130124993"|"20130125322"|"20130127765"|"20130132838"|"2013	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:24 PM

		0141388"|"2013018192 8"|"20130181931"|"201 30188336"|"201302150 64"|"20130307809"|"20 130307827"|"20130321 317"|"20130332876"|"2 0130335357"|"2014002 8601"|"20140057102"|" 20140066139"|"201400 96092"|"20140099235"| "20140104219"|"20140 104220"|"20140132548 "|"20140132549"|"2014 0134433"|"2014013443 4"|"20140139473"|"201 40168128"|"201401919 62"|"20140208248"|"20 140210786"|"20140340 358"|"20140368455"|"2 0150068526"|"2015019 7670"|"20150234518"|" 20150253609"|"363332 2"|"3738166"|"3772685" |"3777222"|"4293734"|" 4296756"|"4302011"|"4 353552"|"4524421"|"45 54419"|"4636632"|"464 4101"|"4770281"|"5241 308"|"5247434"|"52767 87"|"5305423"|"530917 2"|"5311302"|"5343650" |"5386219"|"5448263"|" 5486286"|"5487827"|"5 566096"|"5680160"|"57 42894"|"5743859"|"574 4027"|"5838244"|"5856 822"|"5947334"|"59998 92"|"6108064"|"611843 5"|"6141000"|"6193152" |"6283763"|"6284131"|" 6337681"|"6351271"|"6 392638"|"6417845"|"64 41807"|"6509847"|"652 6315"|"6533757"|"6567 102"|"6626013"|"66362 03"|"6689947"|"672101 9"|"6738514"|"6747636" |"6776546"|"6791640"|" 6801211"|"6879318"|"6 880998"|"6888537"|"69 17282"|"6919927"|"693 3991"|"6961015"|"6967 903"|"7030854"|"70979 03"|"7098776"|"712214 9"|"7138984"|"7205983" |"7254973"|"7289113"|" 7303680"|"7312784"|"7 312791"|"7315336"|"73					

		18892"|"7405779"|"742 3557"|"7437221"|"7535 463"|"7626579"|"76392 39"|"7649577"|"764960 5"|"7659885"|"7675580" |"7692627"|"7692637"|" 7701329"|"7705824"|"7 738068"|"7755612"|"79 03096"|"7932893"|"795 2566"|"7973777"|"7973 778"|"7982721"|"80229 33"|"8057419"|"806802 1"|"8072430"|"8094134" |"8094673"|"8102496"|" 8184228"|"8188982"|"8 199116"|"8207945"|"82 09628"|"8223799"|"822 8309"|"8253699"|"8269 731"|"8269733"|"82701 48"|"8279361"|"828610 2"|"8310452"|"8319743" |"8325143"|"8334835"|" 8334850"|"8345018"|"8 349228"|"8373675"|"83 84674"|"8411039"|"841 6210"|"8424590"|"8427 434"|"8451238"|"84718 24"|"8477111"|"847911 0"|"8487900"|"8493384" |"8497884"|"8508494"|" 8542193"|"8542209"|"8 553012"|"8564559"|"85 87542"|"8624851"|"862 4867"|"8638311"|"8648 839"|"8654104"|"86749 47"|"8692815"|"869877 7"|"8717303"|"8723826" |"8727557"|"8743076"|" 8745514"|"8754862"|"8 760408"|"8780089"|"88 16993"|"8854317"|"886 6785"|"8872798"|"8878 809"|"8878810"|"88849 13"|"8896575"|"891303 1"|"8917262"|"8947381" |"8970540"|"8976128"|" 8982081"|"8988364"|"9 003591"|"9013414"|"90 18030"|"9030427"|"903 5897"|"9041679"|"9045 670"|"9046999"|"90635 97"|"9069204"|"906941 6"|"9069460"|"9092129" |"9098193"|"9116609"|" 9125630"|"9130651"|"9 134880"|"9152258"|"91 52288"|"RE41716").PN.					
L81	442	L79 or L80	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20

							06:24 PM
L82	17	L81 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:24 PM
L83	297	L81 AND (second WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L84	58	L81 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L85	1	L81 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L86	1632	g06f2203/04105.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L87	302	L86 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L88	302	L86 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L89	1	L86 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L90	50	L86 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:36 PM
L91	0	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/08/08 02:49 PM
L92	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/09/07 05:56 PM
L97	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/12/28 10:31 AM
L98	1	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/12/28 11:22 AM
L101	1	"10133397".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/01/04 01:09 PM
L102	3794	(("SMITH") near3	(US-PGPUB; USPAT;	ADJ	ON	ON	2019/01/04

		("Michael")).INV.	USOCR)				05:47 PM
L111	0	"16377142"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/05 05:13 PM
L112	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/07 11:06 AM
L113	344	(virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/07 11:45 AM
L114	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:32 PM
L115	0	"2010175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:35 PM
L116	1	"20110175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:35 PM
L117	2647	(pressure or magnitude) WITH (selection WITH (size))	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:38 PM
L118	87	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:39 PM
L119	2	"14144140"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:52 PM
L120	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2019/08/26 12:52 PM
L121	3953	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2019/08/27 10:25 AM
L122	33	L121 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:25 AM
L123	12635	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L124	14233	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L125	32534	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L126	24788	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L127	62711	(L123 or L124 or L125 or L126)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L128	2317	L127 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L129	82	L127 AND (scal$3 near object).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:30 AM
L130	1	(pressure or magnitude) WITH (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM

		WITH (invers$2 near proportional)					
L131	570	(pressure or magnitude) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM
L132	5	L131 SAME (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM
L133	2751	(pressure or magnitude or touch) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:01 AM
L134	2645	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:14 AM
L135	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:14 AM
L136	0	"13567004".an.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:15 AM
L137	26	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:15 AM
L138	13453	(inversely near (related or proportional)) WITH (pressure or magnitude)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:22 PM
L139	212	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:23 PM
L140	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
L141	0	"09236513".an. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
L142	1	"6323846".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L143	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L144	1	"6323846".pn. AND (inversely)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L152	1	"6323846".pn. AND (invers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/05 11:29 PM
L153	1	"9417754".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/01/16 08:06 PM
L154	1	"16377142" AND watch	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/01/29 12:20 PM
L155	1	"15719406"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L156	16	"15072351"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L157	29	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:44 AM
L158	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L159	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L160	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L161	27	L159 or L160	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L162	1511	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L163	1221	L162 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or short message) or (social network))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L164	18	L158 AND L163	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L165	18	L158 AND L162	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L166	1079	L158 AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L167	606	L166 AND pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM

L168	67	L167 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L169	295	L158 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L170	178	L158 AND menu AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L171	111	L170 NOT L168	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L172	0	(back$1touch settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L173	29	(back$1touch near settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L174	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L175	123	L174 AND (touch$3 AND menu AND (social or sharing))	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L176	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/02/01 10:44 AM
L177	0	L176 AND ((pressure or magnitude) WITH (touch))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L178	0	L176 AND ((pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L179	209	(menu) WITH (social media) WITH (shar$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L180	95945	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L181	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L182	83	L180 AND L181	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L183	2900	touch WITH (pressure or magnitude) WITH thresholds	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L184	10	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L185	71	("5745719").URPN.	(USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L186	6	"11038590"	(USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L187	1	"20060161871".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:44 AM
L188	1	"20060026535".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L189	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L190	76329	(touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L191	5	L189 and L190	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L192	57	(social network or social application) WITH (shar$3 object)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L193	14100	(social network or social application) WITH (post)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L194	4005	L193 AND (SMS and e$1mail)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L195	268	L194 AND (menu WITH GUI)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L196	29	L195 AND (touch WITH (pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L197	51	(GUI or menu) WITH (pressure or magnitude) WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L198	3	"12597684"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L199	626	((context sensitive or context$1sensitive) WITH (icon))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L200	8	L199 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L201	18	menu WITH historical usage	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L202	1	"8191015".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L203	1	"20080065991".pn. AND (menu WITH usage)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM

L204	10465	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L205	9	L204 WITH (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L206	19	L204 SAME (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L207	396	L204 AND (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L208	278	L204 AND (touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L209	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L210	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L211	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L212	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L213	67346	L209 or L210 or L211 or L212	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L214	9404	L213 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L215	3375	L214 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L216	170031	(pressure WITH (magnitude or threshold))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L217	1011	L216 AND L215	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L218	60	L217 AND L204	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L219	185	(slide WITH gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L220	9	L219 AND (slide WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L221	36	L219 AND (slide SAME pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L222	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L223	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L224	12	L223 AND (intermediate state)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L225	48	L223 AND (gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L226	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L227	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:45 AM
L228	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L229	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L230	67346	(L226 or L227 or L228 or L229)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L231	1254	L230 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L232	20	L230 AND (intermediate WITH (pressure or signal or state) WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L233	208	("20010005692"|"20010043291"|"20020002629"|"20020005111"|"20020008691"|"20020033919"|"20020045854"|"20020085952"|"20020116952"|"20020116959"|"20020118180"|"20020130832"|"20020180763"|"20030117408"|"20030123328"|"20030147041"|"20030151589"|"20030217972"|"20030232192"|"20030235452"|"20040084372"|"20040108995"|"20040109788"|"20040121855"|"20040191509"|"20040207542"|"20040212598"|"20040239624"|"20040263488"|"20050045540"|"20050099403"|"20050231461"|"20050242034"|"20050264521"|"20050280746"|"20060001654"|"20060001800"|"20060033701"|"20060077186"|"20060107719"|"20060138983"|"20060146032"|"20060167400"|"20060179088"|"20060195064"|"20060197736"|"20060197737"|"20060209039"|"20060238495"|"20060260711"|"20060262099"|"20060284874"|"20070008064"|"20070035526"|"20070040814"|"20070070047"|"20070085837"|"20070103454"|"20070137901"|"20070146313"|"20070148371"|"2007	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		0153215"|"2007017690 2"|"20070182864"|"200 70195029"|"200702294 77"|"20070237170"|"20 070262967"|"20080007 675"|"20080018613"|"2 0080024459"|"2008002 4712"|"20080060854"|" 20080062169"|"200800 68343"|"20080094367"| "20080100584"|"20080 105600"|"2008013091 0 "|"20080136790"|"2008 0158171"|"2008020442 7"|"20080210843"|"200 80211786"|"200802151 92"|"20080252607"|"20 080252616"|"20080259 046"|"20080295839"|"2 0080304431"|"2009000 2312"|"20090022256"|" 20090036176"|"200900 46110"|"20090051659"| "20090066660"|"20090 073138"|"20090086420 "|"20090091536"|"2009 0143652"|"2009015815 2"|"20090160781"|"200 90213066"|"200902250 53"|"20090271731"|"20 090289912"|"20090295 747"|"20100005390"|"2 0100017872"|"2010002 0039"|"20100026640"|" 20100035656"|"201000 45612"|"20100053103"| "20100053532"|"20100 077829"|"20100079398 "|"20100085500"|"2010 0097347"|"2010013442 9"|"20100134448"|"201 00149101"|"201001491 24"|"20100164884"|"20 100188365"|"20100194 709"|"20100201651"|"2 0100206560"|"2010020 7900"|"20100214499"|" 20100222735"|"201002 25608"|"20100259490"| "20100277432"|"20110 001706"|"20110007023 "|"20110012921"|"2011 0025969"|"2011003772 6"|"20110044064"|"201 10050591"|"201100505 92"|"20110050593"|"20 110050594"|"20110050 608"|"20110051334"|"2					

		0110063248"|"20110088416"|"20110102336"|"20110102347"|"20110105446"|"20110109573"|"20110115738"|"20110118029"|"20110122084"|"20110152739"|"20110169775"|"2011017584 5"|"20110181552"|"20110210942"|"20110210943"|"20110227836"|"20110227877"|"20110239110"|"20110248941"|"20110254793"|"20110260994"|"20110273394"|"20110273396"|"20110291953"|"20120007821"|"20120013566"|"20120019448"|"20120023450"|"20120032876"|"20120034954"|"20120044172"|"20120056846"|"20120086670"|"20120105367"|"20120105370"|"20120109037"|"20120154328"|"20120162087"|"20120182249"|"20120194461"|"20120194462"|"20120223900"|"20120229403"|"20120229404"|"20120229405"|"20120231853"|"20120240044"|"20120242610"|"20120244348"|"20120254747"|"20120266072"|"20120274662"|"20120293449"|"20120306764"|"20120306765"|"20120306766"|"20120313888"|"20130002610"|"20130009869"|"20130021285"|"20130021295"|"20130027350").PN.					
L234	234	("20130124993"|"20130125322"|"20130127765"|"20130132838"|"20130141388"|"20130181928"|"20130181931"|"20130188336"|"20130215064"|"20130307809"|"20130307827"|"20130321317"|"20130332876"|"20130335357"|"20140028601"|"20140057102"|"20140066139"|"20140096092"|"20140099235"|"20140104219"|"20140104220"|"20140132548	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		"|"20140132549"|"2014 0134433"|"2014013443 4"|"20140139473"|"201 40168128"|"201401919 62"|"20140208248"|"20 140210786"|"20140340 358"|"20140368455"|"2 0150068526"|"2015019 7670"|"20150234518"|" 20150253609"|"363332 2"|"3738166"|"3772685" |"3777222"|"4293734"|" 4296756"|"4302011"|"4 353552"|"4524421"|"45 54419"|"4636632"|"464 4101"|"4770281"|"5241 308"|"5247434"|"52767 87"|"5305423"|"530917 2"|"5311302"|"5343650" |"5386219"|"5448263"|" 5486286"|"5487827"|"5 566096"|"5680160"|"57 42894"|"5743859"|"574 4027"|"5838244"|"5856 822"|"5947334"|"59998 92"|"6108064"|"611843 5"|"6141000"|"6193152" |"6283763"|"6284131"|" 6337681"|"6351271"|"6 392638"|"6417845"|"64 41807"|"6509847"|"652 6315"|"6533757"|"6567 102"|"6626013"|"66362 03"|"6689947"|"672101 9"|"6738514"|"6747636" |"6776546"|"6791640"|" 6801211"|"6879318"|"6 880998"|"6888537"|"69 17282"|"6919927"|"693 3991"|"6961015"|"6967 903"|"7030854"|"70979 03"|"7098776"|"712214 9"|"7138984"|"7205983" |"7254973"|"7289113"|" 7303680"|"7312784"|"7 312791"|"7315336"|"73 18892"|"7405779"|"742 3557"|"7437221"|"7535 463"|"7626579"|"76392 39"|"7649577"|"764960 5"|"7659885"|"7675580" |"7692627"|"7692637"|" 7701329"|"7705824"|"7 738068"|"7755612"|"79 03096"|"7932893"|"795 2566"|"7973777"|"7973 778"|"7982721"|"80229 33"|"8057419"|"806802					

		1"|"8072430"|"8094134"|"8094673"|"8102496"|"8184228"|"8188982"|"8199116"|"8207945"|"8209628"|"8223799"|"8228309"|"8253699"|"8269731"|"8269733"|"8270148"|"8279361"|"8286102"|"8310452"|"8319743"|"8325143"|"8334835"|"8334850"|"8345018"|"8349228"|"8373675"|"8384674"|"8411039"|"8416210"|"8424590"|"8427434"|"8451238"|"8471824"|"8477111"|"8479110"|"8487900"|"8493384"|"8497884"|"8508494"|"8542193"|"8542209"|"8553012"|"8564559"|"8587542"|"8624851"|"8624867"|"8638311"|"8648839"|"8654104"|"8674947"|"8692815"|"8698777"|"8717303"|"8723826"|"8727557"|"8743076"|"8745514"|"8754862"|"8760408"|"8780089"|"8816993"|"8854317"|"8866785"|"8872798"|"8878809"|"8878810"|"8884913"|"8896575"|"8913031"|"8917262"|"8947381"|"8970540"|"8976128"|"8982081"|"8988364"|"9003591"|"9013414"|"9018030"|"9030427"|"9035897"|"9041679"|"9045670"|"9046999"|"9063597"|"9069204"|"9069416"|"9069460"|"9092129"|"9098193"|"9116609"|"9125630"|"9130651"|"9134880"|"9152258"|"9152288"|"RE41716").PN.				
L235	442	L233 or L234	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L236	17	L235 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L237	297	L235 AND (second WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L238	58	L235 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

L239	1	L235 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L240	3223	g06f2203/04105.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L241	781	L240 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L242	781	L240 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L243	12	L240 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L244	147	L240 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L245	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L246	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L247	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L248	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L249	1	"10133397".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L250	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L251	1	"16377142"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L252	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L253	360	(virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

L254	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L255	0	"2010175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L256	1	"20110175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L257	2720	(pressure or magnitude) WITH (selection WITH (size))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L258	90	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L259	2	"14144140"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L260	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L261	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L262	36	L261 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L263	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L264	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L265	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L266	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L267	67346	(L263 or L264 or L265 or L266)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L268	2491	L267 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L269	88	L267 AND (scal$3 near object).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L270	2	(pressure or magnitude) WITH (touch or gesture) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L271	573	(pressure or magnitude) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L272	6	L271 SAME (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L273	2783	(pressure or magnitude or touch) WITH	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		(threshold) WITH (invers$3 or revers$3)					
L274	2677	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L275	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L276	0	"13567004".an.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L277	29	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L278	13560	(inversely near (related or proportional)) WITH (pressure or magnitude)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L279	217	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L280	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L281	0	"09236513".an. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L282	1	"6323846".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L283	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L284	1	"6323846".pn. AND (inversely)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L285	1	"6323846".pn. AND (invers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L286	1	"9417754".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L287	1	"16377142" AND watch	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L309	3	"20060026535".pn. or "20110248941".pn. or "20100153879".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/03 09:30 AM
L310	160	(gesture WITH boundary WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/08 05:45 PM
L311	214	(gesture WITH menu WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/08 05:56 PM
L312	8	(menu WITH (cross$1through or cross through or cross$1over or cross over) WITH (select or selection))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:46 AM
L313	487	(menu WITH (boundary) WITH	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:47 AM

		(select or selection))					
L314	20	(menu WITH (boundary) WITH (select or selection) WITH (movement))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:48 AM
L315	551	((pie or radial or circle) near (menu)) AND ((movement or gesture) WITH (selection))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:50 AM
L316	59	((edge or corner) WITH (pie or radial or circle) near menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 10:23 AM
L317	59	((edge or corner) WITH ((pie or radial or circle) near menu))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 10:23 AM
L318	8	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/03/10 12:33 PM
L319	3	L318 AND ((launch or open) WITH (program or application or interface))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:33 PM
L320	10	((pie or radial or circle) near (menu)) WITH ((launch or open) near (program or application))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:38 PM
L321	150	((pie or radial or circle) near (menu)) WITH ((application))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:40 PM
L322	0	(menu WITH (boundary) WITH (cross through or sweep through))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:11 PM
L323	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:12 PM

L324	9	L323 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:12 PM
L325	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 07:34 PM
L326	7	L325 AND (replac$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 07:34 PM
L327	21869	g06f3/0416.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L328	12506	g06f3/016.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L329	18435	g06f3/0412.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L330	6100	g06f3/0414.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L331	30655	g06f3/044.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L332	4212	g06f3/045.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L333	26778	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L334	4601	g06f2203/04104.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L335	80346	L327 or L328 or L329 or L330 or L331 or L332 or L333 or L334	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L336	996	L335 AND (boundary WITH gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:04 PM
L337	137	L336 AND (display WITH (ceas$3 AND maintain$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:05 PM
L338	4099	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/03/11 06:12 PM
L339	3	L338 AND (ceasing near display).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/03/11 06:12 PM
L340	35403	(GUI) AND ((application or program) WITH (top or locked or anchor or protected))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 09:52 AM
L341	5458	(GUI) AND ((application	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06

		or program) WITH (top or locked or anchor or protected) WITH (display))					09:52 AM
L342	21	(GUI) AND ((application or program) WITH (top or locked or anchor or protected) WITH (maintain$3 near display))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 09:52 AM
L343	316	(GUI) AND (menu WITH (protect$3 or ignor$3 or lock$3) WITH mode)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 10:05 AM
L344	2	"13492764"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 10:15 AM
L345	8	("20020116420" | "20090288032" | "20100146384" | "20100159995" | "20100269040" | "20100306705" | "20110047368" | "20120032984").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/04/06 10:16 AM
L346	27	(gesture WITH (edge or boundary) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:21 PM
L347	217	(gesture WITH (edge or boundary)) AND ((finger or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:23 PM
L348	74	(gesture WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:32 PM
L349	126	(swipe WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:33 PM
L350	2121	(lock$3 or protect$3) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 05:59 AM
L351	0	L350 AND (touch or gesture) AND (radial menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 05:59 AM
L352	0	L350 AND ((pie or circle or circular or radial) near menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:00 AM
L353	144	L350 AND (menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:00 AM

L354	2	(parental control) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:02 AM
L355	27	(parental control) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:03 AM
L356	347	(parent or parental) WITH (inactive or disabled or prohibited or locked) AND (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L357	347	((parent or parental) WITH (inactive or disabled or prohibited or locked)) AND (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L358	6	((parent or parental) WITH (inactive or disabled or prohibited or locked)) WITH (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L359	274	(disabl$3 or prevent$3 or lock$3) WITH (application or program or icon) WITH (launch$3 or execut$3) WITH (child or parental)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:14 AM
L360	54	("20110252240"|"20120005723"|"20120109826"|"7721087"|"20060168259"|"20130074142"|"20030233410"|"20100325710"|"20100024016"|"20060149846"|"20100281487"|"6516421"|"20120210443"|"20110210171"|"20100299376"|"8005469"|"20120324067"|"20090300707"|"20060015621"|"20060242685"|"20070254631"|"20100081417"|"20100274910"|"20120131685"|"20110270963"|"20120005745"|"20090181662"|"20070050854"|"20110010699"|"20090254753"|"20120157166"|"20130174222"|"20090031393"|"20100175104"|"20070204166"|"20120214442"|"20020013815"|"20120023573"|"20130219465"|"20040260710"|"7603466"|"8495700"|"20100	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:20 AM

		024020"|"20070204153"|"8208900"|"20080028442"|"20120214503"|"20080184336"|"20090260052"|"20090068996"|"20100024020"|"20100299719"|"6125447"|"7917963"|"8931042").PN.					
L361	4850	(parent or parental) near (lock or disable or access)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:26 AM
L362	83	L361 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:26 AM
L363	1032	(disabl$3 or lock$3) WITH (icon or application) WITH GUI	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:49 AM
L364	70	(disabl$3 or lock$3) WITH (icon or application) WITH GUI WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:50 AM
L365	4	(ignor$3 WITH (flick or swipe) WITH (menu))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:54 AM
L366	276	(ignor$3 WITH (flick or swipe))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:55 AM
L367	21	(ignor$3 WITH (flick or swipe) WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:55 AM
L368	17	(ignor$3 WITH (flick or swipe) WITH mode)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:56 AM
L369	0	(touch WITH menu WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:58 AM
L370	7	(menu WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:58 AM
L371	0	(touch WITH window WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:59 AM
L372	46	(phone or mobile) WITH (contacts) WITH (edge) WITH (swipe or flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:00 AM
L373	0	(phone or mobile) WITH (missed call) WITH (edge) WITH (swipe or flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:01 AM
L374	1	"20060210958".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:02 AM
L375	0	"13567004".an. AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 12:01 AM
L376	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-	(US-PGPUB)	ADJ	ON	ON	2020/08/12 09:15 PM

		$).did.					
L377	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/08/12 09:15 PM
L378	17	L376 or L377	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:15 PM
L379	3	L378 AND (home$1screen or home screen)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:15 PM
L380	253	(icon or gesture) WITH (return near (home$1screen or home screen))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:16 PM
L381	0	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND L378	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:05 PM
L382	3	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND L380	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:05 PM
L383	124	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (icon or button)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:06 PM
L384	66	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:11 PM
L385	4050	(calendar WITH contacts WITH (mail or e$1mail)) AND (home WITH (icon or button))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:25 PM
L386	1125	L385 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L387	155	(calendar WITH contacts WITH (mail or e$1mail)) SAME (home WITH (icon or button))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L388	92	L387 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L389	50	"13567004" AND (home)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:47 PM

L390	0	"13567004".an. AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 06:58 AM
L391	50	"13567004" AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 06:59 AM
L392	2	"20120180001".pn. OR "20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/06 10:28 AM
L393	18	(US-20110302493-$ or US-20080177662-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$ or US-20100251119-$ or US-20100127983-$ or US-20100241989-$ or US-20100088654-$ or US-20050114794-$ or US-20110061021-$ or US-20120054691-$ or US-20120306788-$ or US-20120182296-$).did. or (US-9524042-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:06 PM
L394	2	(US-20100088654-$ or US-20100127983-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L395	14	(US-20130162667-$ or US-20120306788-$ or US-20120225413-$ or US-20110196935-$ or US-20110175805-$ or US-20110145764-$ or US-20100313166-$ or US-20100026640-$ or US-20090207175-$ or US-20080219493-$ or US-20080204427-$ or US-20080178126-$ or US-20080024459-$ or US-20040150644-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L396	1	(US-20100153879-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L397	3	(US-20100153879-$ or US-20060026535-$ or US-20110248941-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L398	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM

		US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.					
L399	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L400	1	(US-20120159380-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L401	86000	L393 or L394 or L395 or L396 or "l6" or L397 or L398 or L399 or "l0"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
L402	131	L401 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
L403	37409	L393 or L394 or L395 or L396 or L397 or L398 or L399 or "l0"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L404	51	L393 or L394 or L395 or L396 or L397 or L398 or L399 or L400	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L405	5	L404 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L406	27	L404 AND ((custom or program$5) WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:43 PM
L407	133	(US-20020130836-$ or US-20080018585-$ or US-20040239602-$ or US-20030227433-$ or US-20060001637-$ or US-20050030292-$ or US-20030048262-$ or US-20060063298-$ or US-20050083426-$ or US-20040012551-$ or US-20050154798-$ or US-20060227117-$ or US-20050134337-$ or US-20030076343-$ or US-20070069798-$ or US-20040263506-$ or US-20090251452-$ or US-20080002122-$ or US-20100060806-$ or US-20030011581-$ or US-20050206991-$ or US-20050185108-$ or	(US-PGPUB; USPAT; JPO; DERWENT)	ADJ	ON	ON	2021/01/08 01:46 PM

		US-20020196238-$ or US-20110007035-$ or US-20080246739-$ or US-20050212746-$).did. or (US-20050262882-$ or US-20070120828-$ or US-20010043167-$ or US-20090058829-$ or US-20080309627-$ or US-20070091292-$ or US-20020057266-$ or US-20020044208-$ or US-20090085881-$ or US-20020196163-$ or US-20040109096-$ or US-20060071887-$ or US-20040160406-$ or US-20040143569-$ or US-20090018419-$ or US-20040150594-$ or US-20070188969-$ or US-20090322689-$ or US-20100090982-$ or US-20090267870-$ or US-20040130524-$ or US-20020167500-$ or US-20080055303-$ or US-20130127800-$ or US-20080231605-$ or US-20120268422-$ or US-20140035818-$).did. or (US-20060033713-$ or US-20080255795-$ or US-20060152484-$ or US-20110164076-$ or US-20100064244-$ or US-20080180406-$ or US-20040150631-$ or US-20110285636-$ or US-20110275317-$ or US-20110037712-$ or US-20100156883-$ or US-20100137079-$ or US-20090195417-$ or US-20090115772-$ or US-20080238879-$ or US-20060262251-$ or US-20130076649-$ or US-20120060123-$ or US-20090040233-$ or US-20080170025-$ or US-20080129904-$ or US-20050123333-$ or US-20060210958-$ or US-20070161382-$ or US-20080178126-$ or US-20040041781-$ or					

		US-20020137550-$).did. or (US-20110298531-$ or US-20080211760-$ or US-20040179005-$ or US-20020041708-$ or US-20070052934-$ or US-20100188327-$ or US-20110276923-$ or US-20060107146-$ or US-20130167062-$ or US-20090189881-$ or US-20160041581-$ or US-20140042406-$).did. or (US-5982302-$ or US-5182549-$ or US-6294875-$ or US-5666288-$ or US-6229506-$ or US-6469684-$ or US-4288836-$ or US-5528235-$ or US-5745719-$ or US-5612690-$ or US-6597347-$ or US-5760767-$ or US-5770997-$ or US-5187776-$ or US-5767832-$ or US-5473343-$ or US-4139837-$ or US-6297788-$ or US-6356223-$ or US-5581243-$ or US-6204839-$ or US-6043638-$ or US-6310611-$ or US-6286104-$ or US-6748249-$ or US-5701597-$).did. or (US-5534892-$ or US-7194702-$ or US-6252563-$ or US-6011545-$ or US-6192080-$ or US-7551341-$ or US-6705868-$ or US-7697656-$ or US-6903662-$ or US-8593448-$ or US-8089376-$ or US-6396483-$ or US-7293231-$).did. or (JP-11352938-$).did. or (WO-0026890-$).did.					
L408	4	L407 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:47 PM

L410	2	"20120180001".pn. or "20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 06:19 PM
L433	0	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 12:19 PM
L434	4453	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/20 12:20 PM
L435	2	L434 AND (boundary WITH edge).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/20 12:20 PM
L436	4	"15879111"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 06:16 PM
L437	1	"16708418"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 06:22 PM
L438	11334	g06f3/0416.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L439	15705	g06f3/016.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L440	24118	g06f3/0412.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L441	2289	g06f3/0414.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L442	12706	g06f3/044.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L443	4900	g06f3/045.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L444	31526	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L445	5338	g06f2203/04104.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L446	82108	L438 or L439 or L440 or L441 or L442 or L443 or L444 or L445	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L447	47	L446 AND (ignor$3 WITH (flick or swipe or gesture) WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L448	0	(("SMITH") near3 ("Michael")).INV. AND ("not" displaying).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/23 01:50 PM
L449	4	(("SMITH") near3 ("Michael")).INV. AND (maintaining display).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/23 01:51 PM
L450	1	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/29 10:02 PM
L451	4	(US-20120180001-$ OR US-20100159995-$ OR US-20090174679-$).did. OR (US-10996787-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/29 10:04 PM
L452	1	"10996787".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/30 03:56 PM
L453	1	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/30

							03:57 PM
L454	5157	((("SMITH") near3 ("Michael"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 11:49 AM
L455	9	L454 AND (navigation OR navigation$1gesture).clm. AND (boundary OR edge).clm.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 11:50 AM
L456	135	L454 AND (protect$3).clm.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 12:54 PM
L457	1	"20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:29 PM
L458	14418	(unlock$3 OR un$1lock$3) WITH (touch OR gesture OR swipe OR flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:40 PM
L459	4133	L458 AND ((touch OR gesture OR swipe OR flick) WITH (sequence OR sequential))	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:40 PM
L460	513	L458 WITH ((touch OR gesture OR swipe OR flick) WITH (sequence OR sequential))	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:41 PM
L461	1990	(protected OR blocked) WITH (state OR status) WITH (GUI OR interface)	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/04/22 11:08 PM
L462	67	L461 AND (unlock$3 WITH "after")	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/04/22 11:08 PM
L463	1	"20160188181".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/01 12:48 PM
L466	1	"13567004" AND (protect$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/06 01:33 PM
L467	1	"20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/06 01:37 PM
L468	15	(swipe OR flick) WITH (context sensitive)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/06 04:46 PM
L469	1674	(gesture) WITH (second WITH sequence)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:55 PM
L470	552	L469 AND (protect$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:55 PM
L471	14	L469 WITH (protect$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:55 PM
L472	81	L469 AND ((gesture OR input) WITH (protect$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/03/11 12:56 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N93	3480	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N94	4153	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N95	9279	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N96	7394	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N99	0	(when near slide gesture).clm.	(USPAT)	ADJ	ON	ON	2019/01/03 07:53 AM
N100	21	(slide gesture WITH second).clm.	(USPAT)	ADJ	ON	ON	2019/01/03 07:53 AM
N103	1	((slide WITH gesture) WITH (pressure) WITH menu).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:45 PM
N104	3821	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N105	4491	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N106	10010	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N107	7926	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N108	19968	N104 or N105 or N106 or N107	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N109	3565	N108 AND (slide or gesture).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:51 PM
N110	203	N109 AND (pressure).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:51 PM
N145	4932	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N146	5592	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N147	12545	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N148	9558	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N149	24442	N145 or N146 or N147 or N148	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N150	39	N149 AND (inversely).clm.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N151	0	"6323846".pn. AND (invers$2)	(USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
N288	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N289	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N290	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01

							10:45 AM
N291	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N292	0	(when near slide gesture).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N293	27	(slide gesture WITH second).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N294	4	((slide WITH gesture) WITH (pressure) WITH menu).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N295	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N296	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N297	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N298	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N299	25236	N295 or N296 or N297 or N298	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N300	4516	N299 AND (slide or gesture).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N301	269	N300 AND (pressure).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N302	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N303	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N304	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N305	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N306	25236	N302 or N303 or N304 or N305	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N307	39	N306 AND (inversely).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N308	0	"6323846".pn. AND (invers$2)	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N409	1	(US-6323846-$).did.	(USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
N411	4302	g06f3/0416.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N412	6160	g06f3/016.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N413	9420	g06f3/0412.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N414	874	g06f3/0414.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N415	4823	g06f3/044.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM

N416	2164	g06f3/045.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N417	11818	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N418	2176	g06f2203/04104.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N419	31615	N411 or N412 or N413 or N414 or N415 or N416 or N417 or N418	(USPAT)	ADJ	ON	ON	2021/03/13 02:33 PM
N420	88	N419 AND ((protect or protected or lock or locked) NEAR (mode or feature or setting)).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 02:34 PM
N421	1	"10,656,753".pn.	(USPAT)	ADJ	ON	ON	2021/03/13 06:18 PM
N422	4302	g06f3/0416.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N423	6160	g06f3/016.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N424	9420	g06f3/0412.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N425	874	g06f3/0414.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N426	4823	g06f3/044.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N427	2164	g06f3/045.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N428	11818	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N429	2176	g06f2203/04104.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N430	31615	N422 or N423 or N424 or N425 or N426 or N427 or N428 or N429	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N431	16	N430 AND ((determin$3 WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N432	35	N430 AND (((determin$3 or detect$3) WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 06:33 PM
N433	135	L454 AND (protect$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 12:54 PM

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	17/206,107	Filing Date	2021-03-18	Docket Number (if applicable)	SMITH070AT_1	Art Unit	2623
First Named Inventor	MICHAEL S. SMITH			Examiner Name	Antonio J Xavier		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 504964

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Signature of Registered U.S. Patent Practitioner			
Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2023-01-24
Name	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: MICHAEL S. SMITH Application No.: 17/206,107 File Date: 03/18/2021 Title: GESTURE-EQUIPPED TOUCH SCREEN SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT	Confirmation No.: 7030 Examiner: XAVIER, ANTONIO J Art Unit: 2623 Docket No.: SMITH070AT_1 Date: 1/24/2023

AMENDMENT
with
REQUEST FOR CONTINUED EXAMINATION (RCE)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

In response to the Final Office Action mailed 04-27-2022 and as a follow up to the Notice of Appeal filed 09-26-2022, please consider the following believed to place the claims in condition for allowance.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

2.-8. (Cancelled)

9. (Previously Presented) A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a display and a touch-sensitive surface, cause the electronic device to:

display a first user interface of a first application on the display;

while displaying the first user interface of the first application, detect a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact

across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, cease to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detect a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, cease to display the first user interface of the first application and displaying the respective other user interface on the display.

10. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein: the first application is determined to be protected when the first application is operating in one of a plurality of predefined protected modes.

11. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

12. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

13. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

14. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu of a control panel.

15. (Previously Presented) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

16. (Previously Presented) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

17. (Previously Presented) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

18. (Previously Presented) The non-transitory computer readable storage medium of claim 14, wherein:

the first application is also determined to be protected when the first user interface of the first application is displayed via the menu, by the first user interface of the first application being displayed on the menu.

19. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

20. (Previously Presented) The non-transitory computer readable storage medium of claim 19, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

21. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein the first application is capable of being protected and at least one other application is not capable of being protected.

22. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application appears in a first manner when protected and appears in a second manner when not protected.

23. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

24. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

25. (Previously Presented) The non-transitory computer readable storage medium of claim 9, wherein at least one of:

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and not being specific to the first application;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and being specific to the first application;

the first application is protected by one or more constraints;

the second contact on the touch-sensitive surface meets the navigation-gesture criteria;

the determination that the second input is detected is detected within a confirmation time threshold of the first input;

the first application is protected by an operating system;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first user interface of the first application is displayed without displaying any user interface of any other application;

the first user interface of the first application is not displayed without displaying any user interface of any other application;

the first user interface of the first application is displayed with another user interface of another application;

the first contact is detected before detecting the second contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even without forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even before forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

wherein the first application is determined to be protected based on a context in which the first contact is detected;

the one or more navigation-gesture criteria includes a single criteria;

the one or more navigation-gesture criteria includes at least one criteria;

the one or more navigation-gesture criteria includes more than one criteria;

the predefined edge region includes a contact area;

the predefined edge region includes a selection area;

the predefined edge region includes a region near an edge;

the predefined edge region includes a region at an edge;

the predefined edge region includes a region within a predetermined distance from an edge;

the predefined edge region includes a contact area near an edge of the display;

the predefined edge region includes a contact area at an edge of the display;

the predefined edge region includes a contact area within a predetermined distance from an edge of the display;

the predefined edge region includes a contact area near an edge of the touch-sensitive surface;

the predefined edge region includes a contact area at an edge of the touch-sensitive surface;

the predefined edge region includes a contact area within a predetermined distance from an edge of the touch-sensitive surface;

the predefined edge region includes a selection area;

the boundary includes a boundary of a contact area;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of an entirety of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of only a portion of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across an entirety of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across only a portion of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the one or more navigation-gesture criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the first application is subject to the first contact meeting the one or more navigation-gesture criteria, by ceasing to display the first user interface of the first application and displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the first application is not subject to the first contact meeting the one or more navigation-gesture criteria, by not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the while displaying the first user interface of the first application includes at any point in time when the first user interface of the first application is displayed;

the while displaying the first user interface of the first application includes an entire duration in time when the first user interface of the first application is displayed; or

the maintaining display of the first user interface of the first application without displaying the respective other user interface, is the same as not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display.

26. (Previously Presented) An electronic device, comprising:

a display;

a touch-sensitive surface;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a

boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

Remarks:

The Examiner has objected to Claim 1. Such objection is deemed avoided by virtue of the clarification made to such claim hereinabove.

The Examiner has objected to the Figures. Such objection is deemed avoided by virtue of the replacement drawing sheet submitted herewith.

Claims 1 and 9-26 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. Applicant respectfully disagrees with this rejection. Specifically, the Examiner takes issue with the following claim language (emphasis added by the Examiner):

> in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:
>
> after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, **detecting a second input** by a second contact on the touch-sensitive surface; and
>
> in response to detecting the second input by the second contact on the touch-sensitive surface:
>
> in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and **displaying the respective other user interface on the display**" (emphasis added).

Further, the Examiner also argued as follows:

> "Examiner was unable to find support for the specifically claimed second input following a first input during a protected state. Specifically, the second input appears to provide two separate functions: (1) bypassing the protected state; and (2) changing the display to the same respective other user interface that the first input would in a non-protected state (emphasis added)."

As a preliminary matter, applicant respectfully disagrees with the Examiner that the claimed "second input" is limited to providing "two separate functions: (1) bypassing the protected state; and (2) changing the display to the same respective other user interface that the first input would in a non-protected state." Applicant respectfully asserts that the claims should only be limited to the actual claim language therein.

Further, there is multitudes of support in the present application that incorporates the grant of the published parent application (US20160188181), where at least one of such examples of support is detailed below. It should be noted that such exemplary citations in the specification are for illustrative purposes only (as there may be others), and should not be deemed limiting to the claim language in any way.

As shown in Fig. 33 below, it is disclosed that an "Application" may or may not be protected by selectively choosing the "Application" option 3316[1] annotated below, in connection with a

[1] It is also disclosed that one can "override" system preferences (e.g. regarding "proximity" and other requirements, etc.) on a "per-application basis": "[0410] In one embodiment, the user interface 1000 may include a check box 1018 which allows the **criteria for backtouch interface enablement to be set on a per-application basis**. As an option, check box 1018 may allow any application to override the preferences set with the plurality of check boxes 1004. … [0418] In various embodiments, the user interface 1000 may allow a user to configure the type and style of feedback provided while an enabled backtouch interface is being used. For example, in one embodiment, the user interface 70.0002.3-00 may include a button 1034 which allows a user to specify whether or not feedback is provided while the backtouch interface is being used. As an option, **this preference may be overridden by applications (e.g., an application may be configured such that it provides backtouch interface feedback independent of any system preferences, etc.). …** [0442] The user interface 1100 may be used to define

gesture. Further, it is disclosed that such gesture may be defined using, for example, a "proximity" criteria (e.g. threshold, etc.) and an action that initiates the display of an other user interface (e.g. launched application interface, new e-mail/SMS interface, other interfaces associated with other application (3340), etc.).

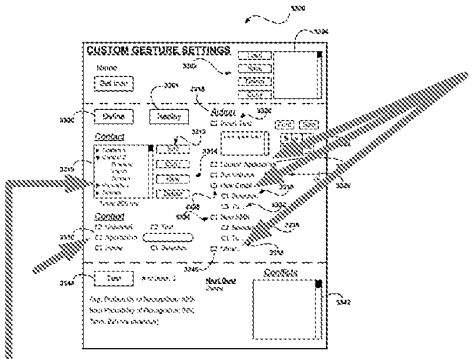

FIGURE 33

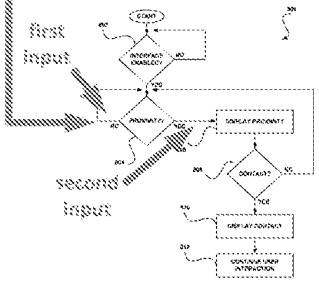

FIGURE 3

As excerpted below (from incorporated US20160188181), it is also disclosed that the "application"-specific gesture may conflict, at least in part, with other "system defined gestures" (i.e. that apply to the "system" versus one "application").

> [0771] The user interface 3300 may be utilized to determine whether the custom gesture may conflict with already established gestures. For example, in various embodiments, the user interface may include a list 3342 of **conflicting gestures**. In one

---

and manage **touch states. In one embodiment, a preset number of global touch states may be defined, which the operating system and applications may make use of. In another embodiment, the touch states may be defined on a per-application basis**."

> embodiment, the list of conflicts may be made up of other custom gestures, as well as **system defined gestures**. In another embodiment, the list may also include **application specific gestures**.
>
> [0772] In yet another embodiment, items in the conflict list may be formatted to indicate their severity. For example, conflicting reserved gestures may be highlighted in red, while conflicting gestures which only exist in a single application may be slightly greyed out. In various embodiments, the conflict list may be created using pattern recognition methods previously discussed, or other methods and algorithms capable of matching patterns and/or data.

In the above context, it is further disclosed, in Fig. 8 of incorporated US20160188181 (annotated above), that such proximity criteria may prevent a first input (gesture) from triggering an action (with an associated user interface), while a second input (gesture) does trigger such action. The disclosed combination of these features (in the context taught) provides support for the claimed feature at issue. To the extent that the Examiner disagrees, applicant hereby requests an Examiner Interview for further discussion.

As additional exemplary support, applicant also brings the Examiner's attention to the following excerpts from incorporated US20160188181:

> [0465] In various embodiments, the touch state dividers 1304 found in the user interface 1300 may each be associated with a plurality of icon buttons 1314 which a user may use to **lock** a touch state divider at a particular value. In one embodiment, adjusting one touch state divider may cause all other unlocked dividers to shift such that the remaining portions of the touch state spectrum are partitioned as evenly as possible. As an option, the user interface 1300 may include a button to unlock all touch state dividers. In another embodiment, the user interface 1300 may include a button 1316 which distributes all unlocked touch state dividers evenly throughout the remaining parts of the touch state spectrum.
>
> [0542] In various embodiments, the association between gesture and operation may be **context-dependent**. In some embodiments, the association depends on application context (e.g., **which application is active**, etc.). For example, in one embodiment, a gesture which scrolls a text field in one application may turn a page when performed in a different application.

[0543] In other embodiments, the **association may depend on application or state context** (e.g., whether or not there is an active selection, whether or not a control has been activated, etc.). For example, in one embodiment, a gesture which may be used to select text may move text if performed when text has already been selected.

[0544] In other embodiments, the association may be independent of context, such that performing the gesture may cause the same operation to be carried out, regardless of what application is active. For example, a gesture which brings up an interface to adjust screen brightness and volume may be defined such that it is always available.

[0713] As depicted, gesture 2806 is represented by a state transition matrix of touch states, with transitions between touch states marked by directional arrows, in accordance with one embodiment. In the context of the present description, a state transition matrix refers to an iconic depiction of a path through a phase space.

[0714] As shown, 2806 represents the phase space made up of all nine possible combinations of the three possible front and back touch states. In one embodiment, these nine combinations may be referred to as **touch state points**. In another embodiment, the representation may also be shown as three-dimensional, with time as the third dimension.

[0716] In various embodiments, a pattern-based generalized gesture may be represented as an ordered sequence of n-tuples. For example, in one embodiment, the gesture 2806 may be represented as a sequence of 2-tuples, (front touch state, back touch state). Specifically, gesture 2806 may be represented as {(s1,s0), (s2,s2),(s0,s1)}. In another embodiment, gesture 2806 may be represented as a sequence of 3-tuples, of the form (front touch state, back touch state, time).

[0717] While exemplary gesture 2806 is based on a path through a touch state phase space, pattern-based gestures may also be based upon types and sources of user input which are not broken into discrete states (i.e. contact pressure level, etc.). Additionally, in some embodiments, pattern-based gestures may be defined in terms of the relative states of input, rather than exact. For example, in one embodiment, a pattern-based gesture may be defined in terms of relative pressure. In other words, rather than require that a fixed pressure be achieved, a user may simply cause a particular change in pressure to occur. In one embodiment, such a pattern-based gesture may be defined in terms of gesture attributes, including derived input such as pressure velocity.

[0718] In various embodiments, **the use of pattern-based gestures based upon relative states may be used to trigger some form of user assistance**. These patterns are well suited to trigger some form of user assistance, as they may be performed and recognized in the middle of performing a different gesture. For example, in one embodiment, a pattern-based gesture defined as a rapid 20% decrease and increase of

contact pressure of any contact, done three times, **may present to the user an interface providing help specific to what the user was doing at the time**. Possible contexts include, but are not limited to, providing a list of possible gestures when help is requested during performance of a gesture, application help or manual depending on what application is active, a detailed explanation of a user interface control which was being selected when help was requested, and/or any other scenario where a user is operating the device.

[0719] In some embodiments, pattern-based gestures may be recognized in the form of an ordered sequence of tuples using a decision tree. The use of a decision tree, or similar form of logic, has the advantage of being computationally inexpensive. This method may be more appropriate for pattern-based gestures which are represented by paths through an easily enumerated phase space. For example, this method of gesture recognition may be more appropriate for a gesture like 2806 than a similar gesture based upon contact pressure levels, rather than touch states.

[0733] Pattern-based gestures may be simple to perform and easy for a user to remember. For this reason, they are well suited to a number of applications. One of the most basic pattern-based gestures is the finger press. In various embodiments, a pattern-based gesture made up of one or more fluctuations of contact pressure between a low level and a higher level at a single contact point may be associated with often used operations. For example, in one embodiment, a double press (i.e. increase then decrease contact pressure twice) **may activate an interface to switch between active applications in a multitasking environment.** In another embodiment, **a triple press may activate a pop-up menu populated with iconic representations of the user's preferred actions, contacts, applications, and scripts.** In one embodiment, these gestures may be surface agnostic. For example, **the application switching interface may be activated no matter which interaction surface received the double press**. In another embodiment, these gestures may be surface specific, allowing other system processes and applications to assign operations to these simple gestures without colliding with a system-wide gesture. For example, a triple press on a side surface may **activate a pop-up favorites menu**, while a triple press on a back surface may **activate an application-specific contextual menu**.

[0782] The user interface 3400 may be utilized **to define the gesture component in terms of touch states**. For example, in one embodiment, the user interface 3400 may include a check box 3410 which allows a user to require a target touch state. In another embodiment, this check box may be associated with a button 3412 which allows a user to specify a touch state by example. As an option, this may be done using an interface similar to that used to define contact pressure levels, velocities, and/or accelerations. In still another embodiment, the touch state may be entered directly.

[0783] The user interface 3400 may be utilized to define the gesture component in terms of a pattern-based pressure gesture. For example, in one embodiment, the user interface 3400 may include a check box 3414 which allows a user **to require the performance of a pattern-based pressure gesture**. In another embodiment, this check box may be associated with a button 3416 which allows a user to specify a pattern-based pressure gesture by example. In one embodiment, this may be done using an interface similar to that used to define contact pressure levels, velocities, and/or accelerations. As an option, this interface may plot the touch states that make up the pattern as it is being defined.

[0784] In one embodiment, the user interface 3400 may include a plot 3418 which displays the currently specified pattern-based pressure gesture, plotting touch states versus time. In another embodiment, the touch state transitions 3420 displayed on plot 3418 may be able to be modified. In still another embodiment, user interface 3400 may include buttons which may be used to create and delete touch state transition markers on plot 3418.

[0785] In another embodiment, the user interface may include a checkbox 3422 which allows a user to specify whether the pattern-based pressure gesture shown in plot 3418 is time dependent or not. As an option, selection of checkbox 3422 may cause the time axis of plot 3418 to display the actual times associated with each touch state transition.

[0786] In one embodiment, the user interface 3400 may include a button 3424 which allows a user to test the pressure-based component gesture as it is presently defined. In another embodiment, selecting button 3424 may display a testing interface to the user. In various embodiments, the testing interface may provide the user with different forms of feedback. Feedback may include, but is not limited to, current contact pressure level and/or touch state, gesture time, probability of correct recognition, and/or any other form of feedback related to performance of a gesture.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Still yet, nothing in this reply should be construed as intention to concede any issue with regard to any claim, except as specifically stated in this reply. Finally, it should be noted that no claims are intended to be construed under 35 U.S.C. 112, paragraph 6.

Respectfully submitted,

Dated: 24 Jan 2023

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	01/24/2023 06:52:47 PM ET	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	61486312	AUTHORIZED BY	-
CUSTOMER #	92045	FILING DATE	03/18/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Michael S Smith

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0581	E20231NI53394603	Patrick Caldwell

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2252	EXTENSION FOR RESPONSE WITHIN SECOND MONTH -	256.00	1	256.00
2801	REQUEST FOR CONTINUED EXAMINATION (RCE) - 1ST REQUEST (SEE 37 CFR 1.114)	544.00	1	544.00
			TOTAL AMOUNT:	$800.00

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**01/24/2023 06:52:47 PM ET**	**SMITH070AT_1**

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DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

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CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	61486312	FILING DATE	03/18/2021
CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 4

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
SMITH070AT_1_ROA_vF_20230124.pdf		21	-	465 KB
SMITH070AT_1_ROA_vF_20230124-AMSB.pdf	(1-1)	1	Amendment Submitted/Entered with Filing of Continued Prosecution Application (CPA)/Request for Continued Examination(RCE)	41 KB
SMITH070AT_1_ROA_vF_20230124-CLM.pdf	(2-13)	12	Claims	71 KB
SMITH070AT_1_ROA_vF_20230124-AMSB.pdf	(14-21)	8	Amendment Submitted/Entered with Filing of Continued	425 KB

		Prosecution Application (CPA)/Request for Continued Examination(RCE)	
SMITH070AT_1_RCE_vF_24-Jan-2023.pdf	3	Request for Continued Examination (RCE)	1642 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/206,107	Filing Date 03/18/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	01/24/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0		x $40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $192 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/VINCENT S BUTLER/
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The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

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NOTICE OF APPEAL FROM THE EXAMINER TO THE PATENT TRIAL AND APPEAL BOARD

Docket Number (Optional): SMITH070AT_1

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Signature: /Patrick Caldwell/

Typed or printed name: Patrick Caldwell

First Named Inventor	
Michael S. Smith	
Application Number	**Filed**
17/206,107	2021-03-18
For	
DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL	
Art Unit	**Examiner**
2623	Antonio J XAVIER

Applicant hereby **appeals** to the Patent Trial and Appeal Board from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) $ 840

☑ Applicant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is: $ 420

☐ Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: $ _____
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Telephone Number: (214) 734-2313

Date: 2022-09-26

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Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

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Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections, or an issued patent, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records.

UNITED STATES
PATENT AND TRADEMARK OFFICE

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Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	09/26/2022 05:36:42 PM ET	SMITH070AT_1

Title of Invention

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7030	FILED BY	Patrick Caldwell
PATENT CENTER #	61005919	AUTHORIZED BY	-
CUSTOMER #	92045	FILING DATE	03/18/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Michael S Smith

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0581	E20229PH37060005	Patrick Caldwell

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2252	EXTENSION FOR RESPONSE WITHIN SECOND MONTH -	320.00	1	320.00
2401	NOTICE OF APPEAL	420.00	1	420.00
			TOTAL AMOUNT:	$740.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d)

and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/206,107	**09/26/2022 05:36:42 PM ET**	**SMITH070AT_1**

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CUSTOMER #	92045	FIRST NAMED INVENTOR	Michael S Smith
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
SMITH070AT_1_NoticeAppeal_20220926_vF.pdf	2	Notice of Appeal Filed	400 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
SMITH070AT_1_NoticeAppeal_20220926_vF.pdf	C867EFE8566984207464C996957D47D731B6118F48CFBFF7A4F7ABCC4E7A808A2BC37798B19F81DF60E0AEDC217CB229BF0FAA1BA981A63FC3A0F7B876E82E5F

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

92045 7590 04/27/2022

The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

EXAMINER	
XAVIER, ANTONIO J	

ART UNIT	PAPER NUMBER
2623	

NOTIFICATION DATE	DELIVERY MODE
04/27/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

caldwelldocketing@gmail.com
eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

Office Action Summary	Application No. 17/206,107	Applicant(s) Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 3/4/22.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1 and 9-26 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1 and 9-26 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/18/21 is/are: a)☐ accepted or b)☑ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☑ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, **detecting a second input** by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and **displaying the respective other user interface on the display**" (see at least **claims 1, 9 and 26** – emphasis added) (see rejection under 35 USC § 112 below for further details) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 1 is objected to because of the following informalities:

a. Claim 1 recites "in accordance with a determination that the first application not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display" (emphasis added). Examiner believes the claim should read "the first application is not protected" (emphasis added).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1 and 9-26 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint

inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites "a method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, **detecting a second input** by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and **displaying the respective other user interface on the display**" (emphasis added).

To clarify, Examiner was unable to find support for the specifically claimed second input following a first input during a protected state. Specifically, the second input appears to provide two separate functions: (1) bypassing the protected state; and (2) changing the display to the same respective other user interface that the first input would in a non-protected state (emphasis added).

Therefore, claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 9 and 26 recite similar language and are rejected for substantially the same reasons, discussed above.

Claims 10-25 are dependent on claim 9 and are rejected for substantially the same reasons, discussed above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTONIO J XAVIER whose telephone number is (571)270-7688. The examiner can normally be reached M-F 530am-2pm PST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an

interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Antonio Xavier/
Primary Examiner, Art Unit 2623

Examiner-Initiated Interview Summary	**Application No.** 17/206,107	**Applicant(s)** Smith, Michael S		
	Examiner ANTONIO J XAVIER	**Art Unit** 2623	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ANTONIO J XAVIER	Primary Examiner	Telephonic
Patrick E. Caldwell (Reg. No.: 44,580)	Attorney of Record	

Date of Interview: 20 April 2022

Issues Discussed:

35 U.S.C. 112

Examiner called Applicant to discuss a potential new matter rejection. Examiner asked if Applicant could discuss and provide support via interview or if a formal action on the merits was preferred.

Applicant requested a formal action on the merits.

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
G06F3/016	09/23/2021	AX
G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

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	ANTONIO J XAVIER	2623

Search Notes		
Search Notes	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
G06F3/016	09/23/2021	AX
G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX
Reviewed patent family	09/23/2021	AX
Inventor	09/23/2021	AX
EAST	09/23/2021	AX
Updated EAST	04/22/2022	AX

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	**Art Unit**
	ANTONIO J XAVIER	2623

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/24/2021	04/22/2022							
	1	✓	✓							
	2	✓	-							
	3	✓	-							
	4	✓	-							
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	25		✓							
	26		✓							

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	0	"15719406"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:33 PM
L2	0	"15072351"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:36 PM
L3	2	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 12:36 PM
L4	3560	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/12 12:40 PM
L5	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L6	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L7	27	L5 or L6	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:21 PM
L8	990	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:25 PM
L9	782	L8 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:26 PM

		short message) or (social network))					
L10	0	L4 AND L9	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:26 PM
L11	0	L4 AND L8	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L12	901	L4 AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L13	508	L12 AND pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L14	36	L13 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L15	244	L4 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L16	133	L4 AND menu AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:27 PM
L17	97	L16 NOT L14	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/12 01:41 PM
L18	0	(back$1touch settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/13 12:27 PM
L19	2	(back$1touch near settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/13 12:31 PM
L20	3561	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 09:58 AM
L21	82	L20 AND (touch$3 AND menu AND (social or sharing))	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 09:58 AM
L22	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	(US-PGPUB)	ADJ	ON	ON	2017/12/14 11:30 AM
L23	0	L22 AND ((pressure or magnitude) WITH (touch))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 11:30 AM
L24	0	L22 AND ((pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 11:30 AM
L25	120	(menu) WITH (social media) WITH (shar$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 01:58 PM
L26	73418	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:39 PM
L27	3561	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2017/12/14 06:40 PM
L28	69	L26 AND L27	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:40 PM
L29	1879	touch WITH (pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14

		or magnitude) WITH thresholds					06:59 PM
L30	4	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 06:59 PM
L31	62	("5745719").URPN.	(USPAT)	ADJ	ON	ON	2017/12/14 07:20 PM
L32	5	"11038590"	(USPAT)	ADJ	ON	ON	2017/12/14 07:21 PM
L33	1	"20060161871".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:22 PM
L34	1	"20060026535".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:24 PM
L35	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L36	57422	(touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L37	5	L35 and L36	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/14 07:51 PM
L38	45	(social network or social application) WITH (shar$3 object)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:22 PM
L39	9596	(social network or social application) WITH (post)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L40	2866	L39 AND (SMS and e$1mail)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L41	196	L40 AND (menu WITH GUI)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:37 PM
L42	18	L41 AND (touch WITH (pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:38 PM
L43	37	(GUI or menu) WITH (pressure or magnitude) WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:50 PM
L44	3	"12597684"	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/15 08:52 PM
L45	581	((context sensitive or context$1sensitive)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/16 04:13 PM

		WITH (icon))					
L46	7	L45 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/16 04:15 PM
L47	13	menu WITH historical usage	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:40 PM
L48	1	"8191015".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:44 PM
L49	1	"20080065991".pn. AND (menu WITH usage)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 01:44 PM
L50	6827	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:20 PM
L51	6	L50 WITH (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:21 PM
L52	12	L50 SAME (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:22 PM
L53	233	L50 AND (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 07:39 PM
L54	165	L50 AND (touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 08:34 PM
L55	8887	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:43 PM
L56	10393	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L57	23568	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L58	18904	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L59	46941	L55 or L56 or L57 or L58	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L60	6344	L59 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L61	2168	L60 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:44 PM
L62	141649	(pressure WITH (magnitude or threshold))	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:45 PM
L63	465	L62 AND L61	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:45 PM
L64	30	L63 AND L50	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/18 09:47 PM
L65	100	(slide WITH gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:32 PM
L66	3	L65 AND (slide WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:39 PM
L67	6	L65 AND (slide SAME pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2017/12/22 09:41 PM
L68	0	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20

							05:52 PM
L69	3580	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2018/01/20 05:52 PM
L70	11	L69 AND (intermediate state)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:52 PM
L71	19	L69 AND (gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:54 PM
L72	9007	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L73	10547	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L74	23888	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L75	19105	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L76	47534	(L72 or L73 or L74 or L75)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:56 PM
L77	843	L76 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:57 PM
L78	15	L76 AND (intermediate WITH (pressure or signal or state) WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 05:57 PM
L79	208	("20010005692"|"20010043291"|"20020002629"|"20020005111"|"20020008691"|"20020033919"|"20020045854"|"20020085952"|"20020116952"|"20020116959"|"20020118180"|"20020130832"|"20020180763"|"20030117408"|"20030123328"|"20030147041"|"20030151589"|"20030217972"|"20030232192"|"20030235452"|"20040084372"|"20040108995"|"20040109788"|"20040121855"|"2004019150 9"|"20040207542"|"20040212598"|"20040239624"|"20040263488"|"20050045540"|"20050099403"|"20050231461"|"20050242034"|"20050264521"|"20050280746"|"20060001654"|"20060001800"|"20060033701"|"20060077186"|"20060107719"|"20060138983"|"20060146032"|"20060167400"|"2006017908	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:23 PM

		8"|"20060195064"|"200 60197736"|"200601977 37"|"20060209039"|"20 060238495"|"20060260 711"|"20060262099"|"2 0060284874"|"2007000 8064"|"20070035526"|" 20070040814"|"200700 70047"|"20070085837"| "20070103454"|"20070 137901"|"20070146313 "|"20070148371"|"2007 0153215"|"2007017690 2"|"20070182864"|"200 70195029"|"200702294 77"|"20070237170"|"20 070262967"|"20080007 675"|"20080018613"|"2 0080024459"|"2008002 4712"|"20080060854"|" 20080062169"|"200800 68343"|"20080094367"| "20080100584"|"20080 105600"|"20080130910 "|"20080136790"|"2008 0158171"|"2008020442 7"|"20080210843"|"200 80211786"|"200802151 92"|"20080252607"|"20 080252616"|"20080259 046"|"20080295839"|"2 0080304431"|"2009000 2312"|"20090022256"|" 20090036176"|"200900 46110"|"20090051659"| "20090066660"|"20090 073138"|"20090086420 "|"20090091536"|"2009 0143652"|"2009015815 2"|"20090160781"|"200 90213066"|"200902250 53"|"20090271731"|"20 090289912"|"20090295 747"|"20100005390"|"2 0100017872"|"2010002 0039"|"20100026640"|" 20100035656"|"201000 45612"|"20100053103"| "20100053532"|"20100 077829"|"20100079398 "|"20100085500"|"2010 0097347"|"2010013442 9"|"20100134448"|"201 00149101"|"201001491 24"|"20100164884"|"20 100188365"|"20100194 709"|"20100201651"|"2 0100206560"|"2010020					

		7900"|"20100214499"|"20100222735"|"20100225608"|"20100259490"|"20100277432"|"20110001706"|"20110007023"|"20110012921"|"20110025969"|"20110037726"|"20110044064"|"20110050591"|"20110050592"|"20110050593"|"20110050594"|"20110050608"|"20110051334"|"20110063248"|"20110088416"|"20110102336"|"20110102347"|"20110105446"|"20110109573"|"20110115738"|"20110118029"|"20110122084"|"20110152739"|"20110169775"|"20110175845"|"20110181552"|"20110210942"|"20110210943"|"20110227836"|"20110227877"|"20110239110"|"20110248941"|"20110254793"|"20110260994"|"20110273394"|"20110273396"|"20110291953"|"20120007821"|"20120013566"|"20120019448"|"20120023450"|"20120032876"|"20120034954"|"20120044172"|"20120056846"|"20120086670"|"20120105367"|"20120105370"|"20120109037"|"20120154328"|"20120162087"|"20120182249"|"20120194461"|"20120194462"|"20120223900"|"20120229403"|"20120229404"|"20120229405"|"20120231853"|"20120240044"|"20120242610"|"20120244348"|"20120254747"|"20120266072"|"20120274662"|"20120293449"|"20120306764"|"20120306765"|"20120306766"|"20120313888"|"20130002610"|"20130009869"|"20130021285"|"20130021295"|"20130027350").PN.					
L80	234	("20130124993"|"20130125322"|"20130127765"|"20130132838"|"2013	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:24 PM

		0141388"|"2013018192 8"|"20130181931"|"201 30188336"|"201302150 64"|"20130307809"|"20 130307827"|"20130321 317"|"20130332876"|"2 0130335357"|"2014002 8601"|"20140057102"|" 20140066139"|"201400 96092"|"20140099235"| "20140104219"|"20140 104220"|"20140132548 "|"20140132549"|"2014 0134433"|"2014013443 4"|"20140139473"|"201 40168128"|"201401919 62"|"20140208248"|"20 140210786"|"20140340 358"|"20140368455"|"2 0150068526"|"2015019 7670"|"20150234518"|" 20150253609"|"363332 2"|"3738166"|"3772685" |"3777222"|"4293734"|" 4296756"|"4302011"|"4 353552"|"4524421"|"45 54419"|"4636632"|"464 4101"|"4770281"|"5241 308"|"5247434"|"52767 87"|"5305423"|"530917 2"|"5311302"|"5343650" |"5386219"|"5448263"|" 5486286"|"5487827"|"5 566096"|"5680160"|"57 42894"|"5743859"|"574 4027"|"5838244"|"5856 822"|"5947334"|"59998 92"|"6108064"|"611843 5"|"6141000"|"6193152" |"6283763"|"6284131"|" 6337681"|"6351271"|"6 392638"|"6417845"|"64 41807"|"6509847"|"652 6315"|"6533757"|"6567 102"|"6626013"|"66362 03"|"6689947"|"672101 9"|"6738514"|"6747636" |"6776546"|"6791640"|" 6801211"|"6879318"|"6 880998"|"6888537"|"69 17282"|"6919927"|"693 3991"|"6961015"|"6967 903"|"7030854"|"70979 03"|"7098776"|"712214 9"|"7138984"|"7205983" |"7254973"|"7289113"|" 7303680"|"7312784"|"7 312791"|"7315336"|"73					

		18892"|"7405779"|"742 3557"|"7437221"|"7535 463"|"7626579"|"76392 39"|"7649577"|"764960 5"|"7659885"|"7675580" |"7692627"|"7692637"|" 7701329"|"7705824"|"7 738068"|"7755612"|"79 03096"|"7932893"|"795 2566"|"7973777"|"7973 778"|"7982721"|"80229 33"|"8057419"|"806802 1"|"8072430"|"8094134" |"8094673"|"8102496"|" 8184228"|"8188982"|"8 199116"|"8207945"|"82 09628"|"8223799"|"822 8309"|"8253699"|"8269 731"|"8269733"|"82701 48"|"8279361"|"828610 2"|"8310452"|"8319743" |"8325143"|"8334835"|" 8334850"|"8345018"|"8 349228"|"8373675"|"83 84674"|"8411039"|"841 6210"|"8424590"|"8427 434"|"8451238"|"84718 24"|"8477111"|"847911 0"|"8487900"|"8493384" |"8497884"|"8508494"|" 8542193"|"8542209"|"8 553012"|"8564559"|"85 87542"|"8624851"|"862 4867"|"8638311"|"8648 839"|"8654104"|"86749 47"|"8692815"|"869877 7"|"8717303"|"8723826" |"8727557"|"8743076"|" 8745514"|"8754862"|"8 760408"|"8780089"|"88 16993"|"8854317"|"886 6785"|"8872798"|"8878 809"|"8878810"|"88849 13"|"8896575"|"891303 1"|"8917262"|"8947381" |"8970540"|"8976128"|" 8982081"|"8988364"|"9 003591"|"9013414"|"90 18030"|"9030427"|"903 5897"|"9041679"|"9045 670"|"9046999"|"90635 97"|"9069204"|"906941 6"|"9069460"|"9092129" |"9098193"|"9116609"|" 9125630"|"9130651"|"9 134880"|"9152258"|"91 52288"|"RE41716").PN.					
L81	442	L79 or L80	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20

							06:24 PM
L82	17	L81 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:24 PM
L83	297	L81 AND (second WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L84	58	L81 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L85	1	L81 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 06:26 PM
L86	1632	g06f2203/04105.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L87	302	L86 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L88	302	L86 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L89	1	L86 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:35 PM
L90	50	L86 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/01/20 07:36 PM
L91	0	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/08/08 02:49 PM
L92	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/09/07 05:56 PM
L97	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/12/28 10:31 AM
L98	1	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2018/12/28 11:22 AM
L101	1	"10133397".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/01/04 01:09 PM
L102	3794	(("SMITH") near3	(US-PGPUB; USPAT;	ADJ	ON	ON	2019/01/04

		("Michael")).INV.	USOCR)				05:47 PM
L111	0	"16377142"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/05 05:13 PM
L112	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/07 11:06 AM
L113	344	(virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/07/07 11:45 AM
L114	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:32 PM
L115	0	"2010175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:35 PM
L116	1	"20110175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/23 12:35 PM
L117	2647	(pressure or magnitude) WITH (selection WITH (size))	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:38 PM
L118	87	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:39 PM
L119	2	"14144140"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/26 12:52 PM
L120	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2019/08/26 12:52 PM
L121	3953	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2019/08/27 10:25 AM
L122	33	L121 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:25 AM
L123	12635	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L124	14233	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L125	32534	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L126	24788	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L127	62711	(L123 or L124 or L125 or L126)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L128	2317	L127 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:29 AM
L129	82	L127 AND (scal$3 near object).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/08/27 10:30 AM
L130	1	(pressure or magnitude) WITH (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM

		WITH (invers$2 near proportional)					
L131	570	(pressure or magnitude) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM
L132	5	L131 SAME (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 10:41 AM
L133	2751	(pressure or magnitude or touch) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:01 AM
L134	2645	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:14 AM
L135	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:14 AM
L136	0	"13567004".an.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:15 AM
L137	26	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/11/29 11:15 AM
L138	13453	(inversely near (related or proportional)) WITH (pressure or magnitude)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:22 PM
L139	212	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:23 PM
L140	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
L141	0	"09236513".an. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
L142	1	"6323846".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L143	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L144	1	"6323846".pn. AND (inversely)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/03 07:35 PM
L152	1	"6323846".pn. AND (invers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2019/12/05 11:29 PM
L153	1	"9417754".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/01/16 08:06 PM
L154	1	"16377142" AND watch	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/01/29 12:20 PM
L155	1	"15719406"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L156	16	"15072351"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L157	29	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:44 AM
L158	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L159	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L160	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L161	27	L159 or L160	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L162	1511	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L163	1221	L162 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or short message) or (social network))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L164	18	L158 AND L163	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L165	18	L158 AND L162	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L166	1079	L158 AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L167	606	L166 AND pressure	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM

L168	67	L167 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L169	295	L158 AND menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L170	178	L158 AND menu AND touch	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L171	111	L170 NOT L168	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L172	0	(back$1touch settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L173	29	(back$1touch near settings)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L174	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L175	123	L174 AND (touch$3 AND menu AND (social or sharing))	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L176	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/02/01 10:44 AM
L177	0	L176 AND ((pressure or magnitude) WITH (touch))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L178	0	L176 AND ((pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L179	209	(menu) WITH (social media) WITH (shar$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L180	95945	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L181	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:44 AM
L182	83	L180 AND L181	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L183	2900	touch WITH (pressure or magnitude) WITH thresholds	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L184	10	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L185	71	("5745719").URPN.	(USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L186	6	"11038590"	(USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L187	1	"20060161871".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:44 AM
L188	1	"20060026535".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L189	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L190	76329	(touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L191	5	L189 and L190	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L192	57	(social network or social application) WITH (shar$3 object)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L193	14100	(social network or social application) WITH (post)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L194	4005	L193 AND (SMS and e$1mail)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L195	268	L194 AND (menu WITH GUI)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L196	29	L195 AND (touch WITH (pressure or magnitude))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L197	51	(GUI or menu) WITH (pressure or magnitude) WITH (context)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L198	3	"12597684"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L199	626	((context sensitive or context$1sensitive) WITH (icon))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L200	8	L199 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L201	18	menu WITH historical usage	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L202	1	"8191015".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L203	1	"20080065991".pn. AND (menu WITH usage)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM

L204	10465	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:44 AM
L205	9	L204 WITH (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L206	19	L204 SAME (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L207	396	L204 AND (touch$3 WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L208	278	L204 AND (touch WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L209	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L210	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L211	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L212	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L213	67346	L209 or L210 or L211 or L212	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L214	9404	L213 AND (pressure WITH touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L215	3375	L214 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L216	170031	(pressure WITH (magnitude or threshold))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L217	1011	L216 AND L215	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L218	60	L217 AND L204	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L219	185	(slide WITH gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L220	9	L219 AND (slide WITH pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L221	36	L219 AND (slide SAME pressure)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L222	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L223	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L224	12	L223 AND (intermediate state)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L225	48	L223 AND (gesture WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L226	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L227	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01

							10:45 AM
L228	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L229	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L230	67346	(L226 or L227 or L228 or L229)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L231	1254	L230 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L232	20	L230 AND (intermediate WITH (pressure or signal or state) WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L233	208	("20010005692"|"20010043291"|"20020002629"|"20020005111"|"20020008691"|"20020033919"|"20020045854"|"20020085952"|"20020116952"|"20020116959"|"20020118180"|"20020130832"|"20020180763"|"20030117408"|"20030123328"|"20030147041"|"20030151589"|"20030217972"|"20030232192"|"20030235452"|"20040084372"|"20040108995"|"20040109788"|"20040121855"|"20040191509"|"20040207542"|"20040212598"|"20040239624"|"20040263488"|"20050045540"|"20050099403"|"20050231461"|"20050242034"|"20050264521"|"20050280746"|"20060001654"|"20060001800"|"20060033701"|"20060077186"|"20060107719"|"20060138983"|"20060146032"|"20060167400"|"20060179088"|"20060195064"|"20060197736"|"20060197737"|"20060209039"|"20060238495"|"20060260711"|"20060262099"|"20060284874"|"20070008064"|"20070035526"|"20070040814"|"20070070047"|"20070085837"|"20070103454"|"20070137901"|"20070146313"|"20070148371"|"2007	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		0153215"|"2007017690 2"|"20070182864"|"200 70195029"|"200702294 77"|"20070237170"|"20 070262967"|"20080007 675"|"20080018613"|"2 0080024459"|"2008002 4712"|"20080060854"|" 20080062169"|"200800 68343"|"20080094367"| "20080100584"|"20080 105600"|"2008013091 0 "|"20080136790"|"2008 0158171"|"2008020442 7"|"20080210843"|"200 80211786"|"200802151 92"|"20080252607"|"20 080252616"|"20080259 046"|"20080295839"|"2 0080304431"|"2009000 2312"|"20090022256"|" 20090036176"|"200900 46110"|"20090051659"| "20090066660"|"20090 073138"|"20090086420 "|"20090091536"|"2009 0143652"|"2009015815 2"|"20090160781"|"200 90213066"|"200902250 53"|"20090271731"|"20 090289912"|"20090295 747"|"20100005390"|"2 0100017872"|"2010002 0039"|"20100026640"|" 20100035656"|"201000 45612"|"20100053103"| "20100053532"|"20100 077829"|"20100079398 "|"20100085500"|"2010 0097347"|"2010013442 9"|"20100134448"|"201 00149101"|"201001491 24"|"20100164884"|"20 100188365"|"20100194 709"|"20100201651"|"2 0100206560"|"2010020 7900"|"20100214499"|" 20100222735"|"201002 25608"|"20100259490"| "20100277432"|"20110 001706"|"20110007023 "|"20110012921"|"2011 0025969"|"2011003772 6"|"20110044064"|"201 10050591"|"201100505 92"|"20110050593"|"20 110050594"|"20110050 608"|"20110051334"|"2					

		0110063248"|"20110088416"|"20110102336"|"20110102347"|"20110105446"|"20110109573"|"20110115738"|"20110118029"|"20110122084"|"20110152739"|"20110169775"|"20110175845"|"20110181552"|"20110210942"|"20110210943"|"20110227836"|"20110227877"|"20110239110"|"20110248941"|"20110254793"|"20110260994"|"20110273394"|"20110273396"|"20110291953"|"20120007821"|"20120013566"|"20120019448"|"20120023450"|"20120032876"|"20120034954"|"20120044172"|"20120056846"|"20120086670"|"20120105367"|"20120105370"|"20120109037"|"20120154328"|"20120162087"|"20120182249"|"20120194461"|"20120194462"|"20120223900"|"20120229403"|"20120229404"|"20120229405"|"20120231853"|"20120240044"|"20120242610"|"20120244348"|"20120254747"|"20120266072"|"20120274662"|"20120293449"|"20120306764"|"20120306765"|"20120306766"|"20120313888"|"20130002610"|"20130009869"|"20130021285"|"20130021295"|"20130027350").PN.					
L234	234	("20130124993"|"20130125322"|"20130127765"|"20130132838"|"20130141388"|"20130181928"|"20130181931"|"20130188336"|"20130215064"|"20130307809"|"20130307827"|"20130321317"|"20130332876"|"20130335357"|"20140028601"|"20140057102"|"20140066139"|"20140096092"|"20140099235"|"20140104219"|"20140104220"|"20140132548	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		"|"20140132549"|"2014 0134433"|"2014013443 4"|"20140139473"|"201 40168128"|"201401919 62"|"20140208248"|"20 140210786"|"20140340 358"|"20140368455"|"2 0150068526"|"2015019 7670"|"20150234518"|" 20150253609"|"363332 2"|"3738166"|"3772685" |"3777222"|"4293734"|" 4296756"|"4302011"|"4 353552"|"4524421"|"45 54419"|"4636632"|"464 4101"|"4770281"|"5241 308"|"5247434"|"52767 87"|"5305423"|"530917 2"|"5311302"|"5343650" |"5386219"|"5448263"|" 5486286"|"5487827"|"5 566096"|"5680160"|"57 42894"|"5743859"|"574 4027"|"5838244"|"5856 822"|"5947334"|"59998 92"|"6108064"|"611843 5"|"6141000"|"6193152" |"6283763"|"6284131"|" 6337681"|"6351271"|"6 392638"|"6417845"|"64 41807"|"6509847"|"652 6315"|"6533757"|"6567 102"|"6626013"|"66362 03"|"6689947"|"672101 9"|"6738514"|"6747636" |"6776546"|"6791640"|" 6801211"|"6879318"|"6 880998"|"6888537"|"69 17282"|"6919927"|"693 3991"|"6961015"|"6967 903"|"7030854"|"70979 03"|"7098776"|"712214 9"|"7138984"|"7205983" |"7254973"|"7289113"|" 7303680"|"7312784"|"7 312791"|"7315336"|"73 18892"|"7405779"|"742 3557"|"7437221"|"7535 463"|"7626579"|"76392 39"|"7649577"|"764960 5"|"7659885"|"7675580" |"7692627"|"7692637"|" 7701329"|"7705824"|"7 738068"|"7755612"|"79 03096"|"7932893"|"795 2566"|"7973777"|"7973 778"|"7982721"|"80229 33"|"8057419"|"806802					

		1"|"8072430"|"8094134"|"8094673"|"8102496"|"8184228"|"8188982"|"8199116"|"8207945"|"8209628"|"8223799"|"8228309"|"8253699"|"8269731"|"8269733"|"8270148"|"8279361"|"8286102"|"8310452"|"8319743"|"8325143"|"8334835"|"8334850"|"8345018"|"8349228"|"8373675"|"8384674"|"8411039"|"8416210"|"8424590"|"8427434"|"8451238"|"8471824"|"8477111"|"8479110"|"8487900"|"8493384"|"8497884"|"8508494"|"8542193"|"8542209"|"8553012"|"8564559"|"8587542"|"8624851"|"8624867"|"8638311"|"8648839"|"8654104"|"8674947"|"8692815"|"8698777"|"8717303"|"8723826"|"8727557"|"8743076"|"8745514"|"8754862"|"8760408"|"8780089"|"8816993"|"8854317"|"8866785"|"8872798"|"8878809"|"8878810"|"8884913"|"8896575"|"8913031"|"8917262"|"8947381"|"8970540"|"8976128"|"8982081"|"8988364"|"9003591"|"9013414"|"9018030"|"9030427"|"9035897"|"9041679"|"9045670"|"9046999"|"9063597"|"9069204"|"9069416"|"9069460"|"9092129"|"9098193"|"9116609"|"9125630"|"9130651"|"9134880"|"9152258"|"9152288"|"RE41716").PN.				
L235	442	L233 or L234	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L236	17	L235 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L237	297	L235 AND (second WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L238	58	L235 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

L239	1	L235 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L240	3223	g06f2203/04105.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L241	781	L240 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L242	781	L240 AND (second WITH (pressure or signal or state) WITH third)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L243	12	L240 AND (second WITH (pressure or signal or state) WITH third) WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L244	147	L240 AND (intermediate WITH (pressure or signal or state))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L245	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L246	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L247	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L248	10	"15072354"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L249	1	"10133397".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L250	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L251	1	"16377142"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L252	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L253	360	(virtual layer).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

L254	1	"3659229".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L255	0	"2010175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L256	1	"20110175805".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L257	2720	(pressure or magnitude) WITH (selection WITH (size))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L258	90	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L259	2	"14144140"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L260	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L261	4073	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L262	36	L261 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L263	13783	G06F3/04847.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L264	15352	G06F3/04817.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L265	35168	g06f3/0482.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L266	26419	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L267	67346	(L263 or L264 or L265 or L266)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L268	2491	L267 AND (scal$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L269	88	L267 AND (scal$3 near object).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L270	2	(pressure or magnitude) WITH (touch or gesture) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L271	573	(pressure or magnitude) WITH (invers$2 near proportional)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L272	6	L271 SAME (touch or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L273	2783	(pressure or magnitude or touch) WITH	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM

		(threshold) WITH (invers$3 or revers$3)					
L274	2677	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L275	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L276	0	"13567004".an.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L277	29	"13567004"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L278	13560	(inversely near (related or proportional)) WITH (pressure or magnitude)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L279	217	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L280	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L281	0	"09236513".an. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L282	1	"6323846".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L283	0	"6323846".pn. AND (invers$2)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L284	1	"6323846".pn. AND (inversely)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L285	1	"6323846".pn. AND (invers$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
L286	1	"9417754".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L287	1	"16377142" AND watch	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/02/01 10:45 AM
L309	3	"20060026535".pn. or "20110248941".pn. or "20100153879".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/02/03 09:30 AM
L310	160	(gesture WITH boundary WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/08 05:45 PM
L311	214	(gesture WITH menu WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/08 05:56 PM
L312	8	(menu WITH (cross$1through or cross through or cross$1over or cross over) WITH (select or selection))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:46 AM
L313	487	(menu WITH (boundary) WITH	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:47 AM

		(select or selection))					
L314	20	(menu WITH (boundary) WITH (select or selection) WITH (movement))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:48 AM
L315	551	((pie or radial or circle) near (menu)) AND ((movement or gesture) WITH (selection))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 09:50 AM
L316	59	((edge or corner) WITH (pie or radial or circle) near menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 10:23 AM
L317	59	((edge or corner) WITH ((pie or radial or circle) near menu))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 10:23 AM
L318	8	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/03/10 12:33 PM
L319	3	L318 AND ((launch or open) WITH (program or application or interface))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:33 PM
L320	10	((pie or radial or circle) near (menu)) WITH ((launch or open) near (program or application))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:38 PM
L321	150	((pie or radial or circle) near (menu)) WITH ((application))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 12:40 PM
L322	0	(menu WITH (boundary) WITH (cross through or sweep through))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:11 PM
L323	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:12 PM

L324	9	L323 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 06:12 PM
L325	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 07:34 PM
L326	7	L325 AND (replac$3)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/10 07:34 PM
L327	21869	g06f3/0416.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L328	12506	g06f3/016.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L329	18435	g06f3/0412.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L330	6100	g06f3/0414.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L331	30655	g06f3/044.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L332	4212	g06f3/045.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L333	26778	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L334	4601	g06f2203/04104.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L335	80346	L327 or L328 or L329 or L330 or L331 or L332 or L333 or L334	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:03 PM
L336	996	L335 AND (boundary WITH gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:04 PM
L337	137	L336 AND (display WITH (ceas$3 AND maintain$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/03/11 06:05 PM
L338	4099	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/03/11 06:12 PM
L339	3	L338 AND (ceasing near display).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/03/11 06:12 PM
L340	35403	(GUI) AND ((application or program) WITH (top or locked or anchor or protected))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 09:52 AM
L341	5458	(GUI) AND ((application	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06

		or program) WITH (top or locked or anchor or protected) WITH (display))					09:52 AM
L342	21	(GUI) AND ((application or program) WITH (top or locked or anchor or protected) WITH (maintain$3 near display))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 09:52 AM
L343	316	(GUI) AND (menu WITH (protect$3 or ignor$3 or lock$3) WITH mode)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 10:05 AM
L344	2	"13492764"	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 10:15 AM
L345	8	("20020116420" | "20090288032" | "20100146384" | "20100159995" | "20100269040" | "20100306705" | "20110047368" | "20120032984").PN.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2020/04/06 10:16 AM
L346	27	(gesture WITH (edge or boundary) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:21 PM
L347	217	(gesture WITH (edge or boundary)) AND ((finger or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:23 PM
L348	74	(gesture WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:32 PM
L349	126	(swipe WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/06 03:33 PM
L350	2121	(lock$3 or protect$3) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 05:59 AM
L351	0	L350 AND (touch or gesture) AND (radial menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 05:59 AM
L352	0	L350 AND ((pie or circle or circular or radial) near menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:00 AM
L353	144	L350 AND (menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:00 AM

L354	2	(parental control) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:02 AM
L355	27	(parental control) WITH (touch)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:03 AM
L356	347	(parent or parental) WITH (inactive or disabled or prohibited or locked) AND (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L357	347	((parent or parental) WITH (inactive or disabled or prohibited or locked)) AND (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L358	6	((parent or parental) WITH (inactive or disabled or prohibited or locked)) WITH (swipe or gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:07 AM
L359	274	(disabl$3 or prevent$3 or lock$3) WITH (application or program or icon) WITH (launch$3 or execut$3) WITH (child or parental)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:14 AM
L360	54	("20110252240"|"20120005723"|"20120109826"|"7721087"|"20060168259"|"20130074142"|"20030233410"|"20100325710"|"20100024016"|"20060149846"|"20100281487"|"6516421"|"20120210443"|"20110210171"|"20100299376"|"8005469"|"20120324067"|"20090300707"|"20060015621"|"20060242685"|"20070254631"|"20100081417"|"20100274910"|"20120131685"|"20110270963"|"20120005745"|"20090181662"|"20070050854"|"20110010699"|"20090254753"|"20120157166"|"20130174222"|"20090031393"|"20100175104"|"20070204166"|"20120214442"|"20020013815"|"20120023573"|"20130219465"|"20040260710"|"7603466"|"8495700"|"20100	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:20 AM

		024020"|"20070204153"|"8208900"|"20080028442"|"20120214503"|"20080184336"|"20090260052"|"20090068996"|"20100024020"|"20100299719"|"6125447"|"7917963"|"8931042").PN.					
L361	4850	(parent or parental) near (lock or disable or access)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:26 AM
L362	83	L361 AND (touch WITH menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:26 AM
L363	1032	(disabl$3 or lock$3) WITH (icon or application) WITH GUI	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:49 AM
L364	70	(disabl$3 or lock$3) WITH (icon or application) WITH GUI WITH menu	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:50 AM
L365	4	(ignor$3 WITH (flick or swipe) WITH (menu))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:54 AM
L366	276	(ignor$3 WITH (flick or swipe))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:55 AM
L367	21	(ignor$3 WITH (flick or swipe) WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:55 AM
L368	17	(ignor$3 WITH (flick or swipe) WITH mode)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:56 AM
L369	0	(touch WITH menu WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:58 AM
L370	7	(menu WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:58 AM
L371	0	(touch WITH window WITH (stay near top))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 06:59 AM
L372	46	(phone or mobile) WITH (contacts) WITH (edge) WITH (swipe or flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:00 AM
L373	0	(phone or mobile) WITH (missed call) WITH (edge) WITH (swipe or flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:01 AM
L374	1	"20060210958".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/04/13 07:02 AM
L375	0	"13567004".an. AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 12:01 AM
L376	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-	(US-PGPUB)	ADJ	ON	ON	2020/08/12 09:15 PM

		$).did.					
L377	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.	(US-PGPUB)	ADJ	ON	ON	2020/08/12 09:15 PM
L378	17	L376 or L377	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:15 PM
L379	3	L378 AND (home$1screen or home screen)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:15 PM
L380	253	(icon or gesture) WITH (return near (home$1screen or home screen))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 09:16 PM
L381	0	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND L378	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:05 PM
L382	3	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND L380	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:05 PM
L383	124	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (icon or button)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:06 PM
L384	66	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (menu)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:11 PM
L385	4050	(calendar WITH contacts WITH (mail or e$1mail)) AND (home WITH (icon or button))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:25 PM
L386	1125	L385 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L387	155	(calendar WITH contacts WITH (mail or e$1mail)) SAME (home WITH (icon or button))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L388	92	L387 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:28 PM
L389	50	"13567004" AND (home)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/12 11:47 PM

L390	0	"13567004".an. AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 06:58 AM
L391	50	"13567004" AND (home or home$1gesture)	(US-PGPUB; USPAT)	ADJ	ON	ON	2020/08/13 06:59 AM
L392	2	"20120180001".pn. OR "20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/06 10:28 AM
L393	18	(US-20110302493-$ or US-20080177662-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$ or US-20100251119-$ or US-20100127983-$ or US-20100241989-$ or US-20100088654-$ or US-20050114794-$ or US-20110061021-$ or US-20120054691-$ or US-20120306788-$ or US-20120182296-$).did. or (US-9524042-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:06 PM
L394	2	(US-20100088654-$ or US-20100127983-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L395	14	(US-20130162667-$ or US-20120306788-$ or US-20120225413-$ or US-20110196935-$ or US-20110175805-$ or US-20110145764-$ or US-20100313166-$ or US-20100026640-$ or US-20090207175-$ or US-20080219493-$ or US-20080204427-$ or US-20080178126-$ or US-20080024459-$ or US-20040150644-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L396	1	(US-20100153879-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:06 PM
L397	3	(US-20100153879-$ or US-20060026535-$ or US-20110248941-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L398	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM

		US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.					
L399	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L400	1	(US-20120159380-$).did.	(US-PGPUB)	ADJ	ON	ON	2021/01/08 01:07 PM
L401	86000	L393 or L394 or L395 or L396 or "l6" or L397 or L398 or L399 or "l0"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
L402	131	L401 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
L403	37409	L393 or L394 or L395 or L396 or L397 or L398 or L399 or "l0"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L404	51	L393 or L394 or L395 or L396 or L397 or L398 or L399 or L400	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L405	5	L404 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:08 PM
L406	27	L404 AND ((custom or program$5) WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:43 PM
L407	133	(US-20020130836-$ or US-20080018585-$ or US-20040239602-$ or US-20030227433-$ or US-20060001637-$ or US-20050030292-$ or US-20030048262-$ or US-20060063298-$ or US-20050083426-$ or US-20040012551-$ or US-20050154798-$ or US-20060227117-$ or US-20050134337-$ or US-20030076343-$ or US-20070069798-$ or US-20040263506-$ or US-20090251452-$ or US-20080002122-$ or US-20100060806-$ or US-20030011581-$ or US-20050206991-$ or US-20050185108-$ or	(US-PGPUB; USPAT; JPO; DERWENT)	ADJ	ON	ON	2021/01/08 01:46 PM

		US-20020196238-$ or US-20110007035-$ or US-20080246739-$ or US-20050212746-$).did. or (US-20050262882-$ or US-20070120828-$ or US-20010043167-$ or US-20090058829-$ or US-20080309627-$ or US-20070091292-$ or US-20020057266-$ or US-20020044208-$ or US-20090085881-$ or US-20020196163-$ or US-20040109096-$ or US-20060071887-$ or US-20040160406-$ or US-20040143569-$ or US-20090018419-$ or US-20040150594-$ or US-20070188969-$ or US-20090322689-$ or US-20100090982-$ or US-20090267870-$ or US-20040130524-$ or US-20020167500-$ or US-20080055303-$ or US-20130127800-$ or US-20080231605-$ or US-20120268422-$ or US-20140035818-$).did. or (US-20060033713-$ or US-20080255795-$ or US-20060152484-$ or US-20110164076-$ or US-20100064244-$ or US-20080180406-$ or US-20040150631-$ or US-20110285636-$ or US-20110275317-$ or US-20110037712-$ or US-20100156883-$ or US-20100137079-$ or US-20090195417-$ or US-20090115772-$ or US-20080238879-$ or US-20060262251-$ or US-20130076649-$ or US-20120060123-$ or US-20090040233-$ or US-20080170025-$ or US-20080129904-$ or US-20050123333-$ or US-20060210958-$ or US-20070161382-$ or US-20080178126-$ or US-20040041781-$ or					

		US-20020137550-$).did. or (US-20110298531-$ or US-20080211760-$ or US-20040179005-$ or US-20020041708-$ or US-20070052934-$ or US-20100188327-$ or US-20110276923-$ or US-20060107146-$ or US-20130167062-$ or US-20090189881-$ or US-20160041581-$ or US-20140042406-$).did. or (US-5982302-$ or US-5182549-$ or US-6294875-$ or US-5666288-$ or US-6229506-$ or US-6469684-$ or US-4288836-$ or US-5528235-$ or US-5745719-$ or US-5612690-$ or US-6597347-$ or US-5760767-$ or US-5770997-$ or US-5187776-$ or US-5767832-$ or US-5473343-$ or US-4139837-$ or US-6297788-$ or US-6356223-$ or US-5581243-$ or US-6204839-$ or US-6043638-$ or US-6310611-$ or US-6286104-$ or US-6748249-$ or US-5701597-$).did. or (US-5534892-$ or US-7194702-$ or US-6252563-$ or US-6011545-$ or US-6192080-$ or US-7551341-$ or US-6705868-$ or US-7697656-$ or US-6903662-$ or US-8593448-$ or US-8089376-$ or US-6396483-$ or US-7293231-$).did. or (JP-11352938-$).did. or (WO-0026890-$).did.					
L408	4	L407 AND (gesture WITH function)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 01:47 PM

L410	2	"20120180001".pn. or "20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/01/08 06:19 PM
L433	0	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 12:19 PM
L434	4453	(("SMITH") near3 ("Michael")).INV.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/20 12:20 PM
L435	2	L434 AND (boundary WITH edge).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/20 12:20 PM
L436	4	"15879111"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 06:16 PM
L437	1	"16708418"	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/20 06:22 PM
L438	11334	g06f3/0416.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L439	15705	g06f3/016.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L440	24118	g06f3/0412.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L441	2289	g06f3/0414.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L442	12706	g06f3/044.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L443	4900	g06f3/045.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L444	31526	g06f3/04883.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L445	5338	g06f2203/04104.cpc.	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L446	82108	L438 or L439 or L440 or L441 or L442 or L443 or L444 or L445	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L447	47	L446 AND (ignor$3 WITH (flick or swipe or gesture) WITH edge)	(US-PGPUB; USPAT)	ADJ	ON	ON	2021/09/23 01:48 PM
L448	0	(("SMITH") near3 ("Michael")).INV. AND ("not" displaying).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/23 01:50 PM
L449	4	(("SMITH") near3 ("Michael")).INV. AND (maintaining display).clm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2021/09/23 01:51 PM
L450	1	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/29 10:02 PM
L451	4	(US-20120180001-$ OR US-20100159995-$ OR US-20090174679-$).did. OR (US-10996787-$).did.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/29 10:04 PM
L452	1	"10996787".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/30 03:56 PM
L453	1	"17206107"	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/30

							03:57 PM
L454	5157	((("SMITH") near3 ("Michael"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 11:49 AM
L455	9	L454 AND (navigation OR navigation$1gesture).clm. AND (boundary OR edge).clm.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 11:50 AM
L456	135	L454 AND (protect$3).clm.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/03/31 12:54 PM
L457	1	"20100159995".pn.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:29 PM
L458	14418	(unlock$3 OR un$1lock$3) WITH (touch OR gesture OR swipe OR flick)	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:40 PM
L459	4133	L458 AND ((touch OR gesture OR swipe OR flick) WITH (sequence OR sequential))	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:40 PM
L460	513	L458 WITH ((touch OR gesture OR swipe OR flick) WITH (sequence OR sequential))	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 02:41 PM
L461	1990	(protected OR blocked) WITH (state OR status) WITH (GUI OR interface)	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/04/22 11:08 PM
L462	67	L461 AND (unlock$3 WITH "after")	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/04/22 11:08 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N93	3480	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N94	4153	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N95	9279	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N96	7394	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2018/09/07 05:58 PM
N99	0	(when near slide gesture).clm.	(USPAT)	ADJ	ON	ON	2019/01/03 07:53 AM
N100	21	(slide gesture WITH second).clm.	(USPAT)	ADJ	ON	ON	2019/01/03 07:53 AM
N103	1	((slide WITH gesture) WITH (pressure) WITH menu).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:45 PM

N104	3821	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N105	4491	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N106	10010	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N107	7926	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N108	19968	N104 or N105 or N106 or N107	(USPAT)	ADJ	ON	ON	2019/01/04 06:50 PM
N109	3565	N108 AND (slide or gesture).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:51 PM
N110	203	N109 AND (pressure).clm.	(USPAT)	ADJ	ON	ON	2019/01/04 06:51 PM
N145	4932	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N146	5592	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N147	12545	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N148	9558	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N149	24442	N145 or N146 or N147 or N148	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N150	39	N149 AND (inversely).clm.	(USPAT)	ADJ	ON	ON	2019/12/03 07:32 PM
N151	0	"6323846".pn. AND (invers$2)	(USPAT)	ADJ	ON	ON	2019/12/03 07:34 PM
N288	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N289	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N290	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N291	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N292	0	(when near slide gesture).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N293	27	(slide gesture WITH second).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N294	4	((slide WITH gesture) WITH (pressure) WITH menu).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N295	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N296	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N297	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N298	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01

							10:45 AM
N299	25236	N295 or N296 or N297 or N298	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N300	4516	N299 AND (slide or gesture).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N301	269	N300 AND (pressure).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N302	5129	G06F3/04847.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N303	5802	G06F3/04817.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N304	12997	g06f3/0482.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N305	9855	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N306	25236	N302 or N303 or N304 or N305	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N307	39	N306 AND (inversely).clm.	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N308	0	"6323846".pn. AND (invers$2)	(USPAT)	ADJ	ON	ON	2020/02/01 10:45 AM
N409	1	(US-6323846-$).did.	(USPAT)	ADJ	ON	ON	2021/01/08 01:07 PM
N411	4302	g06f3/0416.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N412	6160	g06f3/016.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N413	9420	g06f3/0412.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:14 PM
N414	874	g06f3/0414.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N415	4823	g06f3/044.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N416	2164	g06f3/045.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N417	11818	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N418	2176	g06f2203/04104.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 02:15 PM
N419	31615	N411 or N412 or N413 or N414 or N415 or N416 or N417 or N418	(USPAT)	ADJ	ON	ON	2021/03/13 02:33 PM
N420	88	N419 AND ((protect or protected or lock or locked) NEAR (mode or feature or setting)).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 02:34 PM
N421	1	"10,656,753".pn.	(USPAT)	ADJ	ON	ON	2021/03/13 06:18 PM
N422	4302	g06f3/0416.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM

N423	6160	g06f3/016.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N424	9420	g06f3/0412.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N425	874	g06f3/0414.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N426	4823	g06f3/044.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N427	2164	g06f3/045.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N428	11818	g06f3/04883.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N429	2176	g06f2203/04104.cpc.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N430	31615	N422 or N423 or N424 or N425 or N426 or N427 or N428 or N429	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N431	16	N430 AND ((determin$3 WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 06:32 PM
N432	35	N430 AND (((determin$3 or detect$3) WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	(USPAT)	ADJ	ON	ON	2021/03/13 06:33 PM
N433	135	L454 AND (protect$3).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/03/31 12:54 PM

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/206,107	Filing Date 03/18/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	03/04/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 18	Minus	** 20	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $240 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/JASON B EADDY/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: MICHAEL S. SMITH Application No.: 17/206,107 File Date: 03/18/2021 Title: GESTURE-EQUIPPED TOUCH SCREEN SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT	Confirmation No.: 7030 Examiner: XAVIER, ANTONIO J Art Unit: 2623 Docket No.: SMITH070AT Date: 3/4/2022

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

In response to the communication mailed 2021-10-05, please consider the following believed to place the claims in condition for allowance.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets ~~one or more criteria~~ navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the ~~one or more criteria~~ navigation-gesture criteria:

in accordance with a determination that the first application ~~is subject to the first contact meeting the one or more criteria~~ not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is ~~not subject to the first contact meeting the one or more criteria~~ protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

2.-8. (Cancelled)

9. (New) A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a display and a touch-sensitive surface, cause the electronic device to:

display a first user interface of a first application on the display;

while displaying the first user interface of the first application, detect a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the

navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, cease to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detect a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, cease to display the first user interface of the first application and displaying the respective other user interface on the display.

10. (New) The non-transitory computer readable storage medium of claim 9, wherein: the first application is determined to be protected when the first application is operating in one of a plurality of predefined protected modes.

11. (New) The non-transitory computer readable storage medium of claim 9, wherein: the navigation-gesture criteria are application-switching-gesture criteria; and the respective other user interface is another application.

12. (New) The non-transitory computer readable storage medium of claim 9, wherein: the navigation-gesture criteria are control-panel-gesture criteria; and the respective other user interface is a control panel user interface.

13. (New) The non-transitory computer readable storage medium of claim 9, wherein: the navigation-gesture criteria are application-switcher-gesture criteria; and the respective other user interface is an application-switcher user interface.

14. (New) The non-transitory computer readable storage medium of claim 9, wherein: the first application is determined to be protected when the first user interface of the first application is displayed via a menu of a control panel.

15. (New) The non-transitory computer readable storage medium of claim 14, wherein: the navigation-gesture criteria are application-switching-gesture criteria; and the respective other user interface is another application.

16. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

17. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

18. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the first application is also determined to be protected when the first user interface of the first application is displayed via the menu, by the first user interface of the first application being displayed on the menu.

19. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

20. (New) The non-transitory computer readable storage medium of claim 19, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

21. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is capable of being protected and at least one other application is not capable of being protected.

22. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application appears in a first manner when protected and appears in a second manner when not protected.

23. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

24. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

25. (New) The non-transitory computer readable storage medium of claim 9, wherein at least one of:

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and not being specific to the first application;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and being specific to the first application;

the first application is protected by one or more constraints;

the second contact on the touch-sensitive surface meets the navigation-gesture criteria;

the determination that the second input is detected is detected within a confirmation time threshold of the first input;

the first application is protected by an operating system;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first user interface of the first application is displayed without displaying any user interface of any other application;

the first user interface of the first application is not displayed without displaying any user interface of any other application;

the first user interface of the first application is displayed with another user interface of another application;

the first contact is detected before detecting the second contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even without forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even before forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

wherein the first application is determined to be protected based on a context in which the first contact is detected;

the one or more navigation-gesture criteria includes a single criteria;

the one or more navigation-gesture criteria includes at least one criteria;

the one or more navigation-gesture criteria includes more than one criteria;

the predefined edge region includes a contact area;

the predefined edge region includes a selection area;

the predefined edge region includes a region near an edge;

the predefined edge region includes a region at an edge;

the predefined edge region includes a region within a predetermined distance from an edge;

the predefined edge region includes a contact area near an edge of the display;

the predefined edge region includes a contact area at an edge of the display;

the predefined edge region includes a contact area within a predetermined distance from an edge of the display;

the predefined edge region includes a contact area near an edge of the touch-sensitive surface;

the predefined edge region includes a contact area at an edge of the touch-sensitive surface;

the predefined edge region includes a contact area within a predetermined distance from an edge of the touch-sensitive surface;

the predefined edge region includes a selection area;

the boundary includes a boundary of a contact area;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of an entirety of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of only a portion of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across an entirety of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact

across only a portion of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the one or more navigation-gesture criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the first application is subject to the first contact meeting the one or more navigation-gesture criteria, by ceasing to display the first user interface of the first application and displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the first application is not subject to the first contact meeting the one or more navigation-gesture criteria, by not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the while displaying the first user interface of the first application includes at any point in time when the first user interface of the first application is displayed;

the while displaying the first user interface of the first application includes an entire duration in time when the first user interface of the first application is displayed; or

the maintaining display of the first user interface of the first application without displaying the respective other user interface, is the same as not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display.

26. (New) An electronic device, comprising:

a display;

a touch-sensitive surface;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

Remarks:

Rejections based on Double Patenting

Claims 1-14 have been provisionally rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over U.S. Patent No. 10996787. Because this is a provisional rejection, Applicant respectfully submits that filing a Terminal Disclaimer is not presently necessary, and that a Terminal Disclaimer may be filed if necessary, at the appropriate time, e.g., if and when the obviousness type double patenting rejection is the only remaining rejection in this and/or the copending application. See MPEP § 804(I)(B)(l).

Rejections Under 35 U.S.C. 103

Claims 1-8 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Griffin et al. (USPN 2012/0180001) in view of Stallings et al. (USPN 2010/0159995). Applicant respectfully disagrees with such rejection. Specifically, the claims have been amended to avoid the present rejection, as follows (emphasis added):

1. (Currently Amended) A method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets ~~one or more criteria~~ navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the ~~one or more criteria~~ navigation-gesture criteria:

in accordance with a determination that the first application ~~is subject to the first contact meeting the one or more criteria~~ not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is ~~not subject to the first contact meeting the one or more criteria~~ protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991).

Applicant respectfully asserts that at least the third element of the prima facie case of obviousness has not been met, since the prior art excerpts, as relied upon by the Examiner, fail to teach or suggest all of the claim limitations, as noted above. With respect to the other independent claims, applicant respectfully asserts that such claims are deemed allowable for reasons similar, but not necessarily identical, to one or more of the aforementioned reasons (see each claim for specific claim language contained therein).

Still yet, applicant brings to the Examiner's attention the highlighted subject matter of the clams below:

10. (New) The non-transitory computer readable storage medium of claim 9, wherein: the first application is determined to be protected when the first application is operating in one of a plurality of predefined protected modes.

11. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

12. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

13. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

14. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu of a control panel.

15. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

16. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

17. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

18. (New) The non-transitory computer readable storage medium of claim 14, wherein:

the first application is also determined to be protected when the first user interface of the first application is displayed via the menu, by the first user interface of the first application being displayed on the menu.

19. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

20. (New) The non-transitory computer readable storage medium of claim 19, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

21. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is capable of being protected and at least one other application is not capable of being protected.

22. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application appears in a first manner when protected and appears in a second manner when not protected.

23. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

24. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

Again, a notice of allowance or a proper prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Still yet, nothing in this reply should be construed as intention to concede any issue with regard to any claim, except as specifically stated in this reply. Finally, it should be noted that no claims are intended to be construed under 35 U.S.C. 112, paragraph 6.

Respectfully submitted,

Dated: 04 Mar 2022

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Reg. No. 44,580

Electronic Patent Application Fee Transmittal

Application Number:	17206107
Filing Date:	18-Mar-2021
Title of Invention:	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK
First Named Inventor/Applicant Name:	Michael S Smith
Filer:	Patrick Edgar Caldwell
Attorney Docket Number:	SMITH070AT_1

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	2252	1	320	320
Miscellaneous:				
		Total in USD ($)		**320**

Electronic Acknowledgement Receipt	
EFS ID:	45152651
Application Number:	17206107
International Application Number:	
Confirmation Number:	7030
Title of Invention:	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK
First Named Inventor/Applicant Name:	Michael S Smith
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	SMITH070AT_1
Receipt Date:	04-MAR-2022
Filing Date:	18-MAR-2021
Time Stamp:	18:40:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$320
RAM confirmation Number	E202234I41124443
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		SMITH070AT_1_ROA_vF_04-Mar-2022.pdf	116176 cf242580e5e5bee21662fa7690b4ebcb6ee218b7	yes	19

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	1
	Claims	2	13
	Amendment/Request for Reconsideration-After Non-Final Rejection	14	19

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	38543 a38ebb264d52a809433cef04190946 2408f9377f	no	2

Warnings:

Information:

Total Files Size (in bytes):	154719

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/206,107	03/18/2021	Michael S Smith	SMITH070AT_1	7030

92045 7590 10/05/2021

The Caldwell Firm, LLC
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EXAMINER	
XAVIER, ANTONIO J	

ART UNIT	PAPER NUMBER
2623	

NOTIFICATION DATE	DELIVERY MODE
10/05/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eofficeaction@appcoll.com
pcaldwell@thecaldwellfirm.com

Office Action Summary	Application No. 17/206,107	Applicant(s) Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 3/18/21.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-8 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-8 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/18/21 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☑ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claim Rejections - 35 USC § 103

2. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-8 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Griffin et al. (USPN 2012/0180001) in view of Stallings et al. (USPN 2010/0159995).

With respect to claim 1, Griffin teaches **a method** (Figs. 1-16)**, comprising:**

at a device having a display and a touch-sensitive surface (Figs. 1-16. At least Fig. 1, item 118 and paragraphs [0019]-[0021])**:**

displaying a first user interface of a first application on the display (Figs. 1-16. At least Fig. 3, item 302 and paragraphs [0034] teach a home screen interface can be displayed);

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets one or more criteria (Figs. 1-16. At least Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

in response to detecting the first input by the first contact that meets the one or more criteria:

in accordance with a determination that the first application is subject to the first contact meeting the one or more criteria, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display (Figs. 1-16. At least Fig. 5 and paragraphs [0048]-[0051] teach an edge gesture changes the displayed user interface).

However, Griffin fails to teach in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface.

Stallings teaches a known technique using a lock/protected mode to disable functionality of an interface on a touch screen (Figs. 5A-6A and paragraphs [0014] and [0058]-[0063]. Specifically, Stallings teaches **in accordance with a determination that the first application is not subject to the first contact meeting the one or more**

criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface (Figs. 5A-6A and paragraphs [0014] and [0058]-[0063] teach a display which can include locked/protected and unlocked/not protected states. Examiner notes disabling functionality during the lock/protected state results in maintaining display of the user interface).

Griffin teaches a base process/product of touch input including gestures which the claimed invention can be seen as an improvement in that in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface. Stallings teaches a known technique of using a lock/protected mode to disable functionality of an interface on a touch screen that is comparable to the base process/product.

Stallings' known technique of using a lock/protected mode to disable functionality of an interface on a touch screen would have been recognized by one skilled in the art as applicable to the base process/product of Griffin and the results would have been predictable and resulted in modifying the gesture recognition of Griffin such that in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface which results in an improved process/product.

Therefore, the claimed subject matter would have been obvious to a person having ordinary skill in the art at the time the invention was made (Pre-AIA) or before the effective filing date of the claimed invention (AIA).

The rationale to support a conclusion that the claim would have been obvious is that a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. One of ordinary skill in the art would have been capable of applying this known technique to a known device (method, or product) that was ready for improvement and the results would have been predictable to one of ordinary skill in the art.

With respect to claim 2, Griffin in view of Stallings teach the method of claim 1, discussed above, **wherein the one or more criteria require that the first input includes a movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met** (Griffin, Figs. 1-16. At least Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture that requires movement).

With respect to claim 3, Griffin in view of Stallings teach the method of claim 2, discussed above, **wherein the one or more criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary in order for the one or more criteria to be met** (Griffin, Figs. 1-16. At least Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture that requires movement across an edge boundary. Examiner notes the term "boundary" is subject to a reasonably broad interpretation that includes the teachings of Griffin).

With respect to claim 4, Griffin in view of Stallings teach the method of claim 3, discussed above, **wherein the boundary is of a predefined region of the touch-**

sensitive surface (Griffin, Figs. 1-16. At least Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge as the predefined region. Examiner notes the term "predefined region" is subject to a reasonably broad interpretation that includes the teachings of Griffin).

With respect to claim 5, Griffin in view of Stallings teach the method of claim 3, discussed above, **wherein the boundary is of a predefined edge region of the touch-sensitive surface** (Griffin, Figs. 1-16. At least Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture that an edge region).

With respect to claim 6, Griffin in view of Stallings teach the method of claim 4, discussed above, **wherein at least one of:**

the one or more criteria includes navigation-gesture criteria (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes a reasonably broad interpretation of a "navigation-gesture" includes an edge gesture);

the one or more criteria includes a single criteria (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes an edge gesture includes at least location criteria);

the one or more criteria includes at least one criteria (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes an edge gesture includes at least location criteria);

the one or more criteria includes more than one criteria (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes an edge gesture includes at least location and direction criteria);

the predefined edge region includes a contact area (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge area);

the predefined edge region includes a selection area (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes the term "selection area" is subject to a reasonably broad interpretation that includes the teachings of Griffin);

the predefined edge region includes a region near an edge (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the predefined edge region includes a region at an edge (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the predefined edge region includes a region within a predetermined distance from an edge (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes the claim does not require a specific predetermined distance and a reasonably broad interpretation includes the teachings of Griffin);

the predefined edge region includes a contact area near an edge of the display (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the predefined edge region includes a contact area at an edge of the display (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the predefined edge region includes a contact area within a predetermined distance from an edge of the display (Griffin, Fig. 5 and paragraphs [0048]-[0051]

teach detecting an edge gesture. Examiner notes the claim does not require a specific predetermined distance and a reasonably broad interpretation includes the teachings of Griffin);

the predefined edge region includes a contact area near an edge of the touch-sensitive surface (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the predefined edge region includes a contact area at an edge of the touch-sensitive surface (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the predefined edge region includes a contact area within a predetermined distance from an edge of the touch-sensitive surface (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture. Examiner notes the claim does not require a specific predetermined distance and a reasonably broad interpretation includes the teachings of Griffin);

the predefined edge region includes a selection area (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the boundary includes a boundary of a contact area (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of an entirety of the first contact across the touch-sensitive surface in order for the one or more criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of only a portion of the first contact across the touch-sensitive surface in order for the one or more criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of the first contact across an entirety of the touch-sensitive surface in order for the one or more criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of the first contact across only a portion of the touch-sensitive surface in order for the one or more criteria to be met (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the one or more criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the one or more criteria to be met (Griffin, Fig. 5 and paragraphs [0048]-[0051] teach detecting an edge gesture);

the first application is subject to the first contact meeting the one or more criteria by not being protected therefrom;

the first application is not subject to the first contact meeting the one or more criteria by being protected therefrom;

the first application is subject to the first contact meeting the one or more criteria, by ceasing to display the first user interface of the first application and displaying the respective other user interface on the display in response to the first contact meeting the one or more criteria (Griffin, Fig. 5 and paragraphs [0048]-[0051);

the first application is not subject to the first contact meeting the one or more criteria, by not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display in response to the first contact meeting the one or more criteria;

the while displaying the first user interface of the first application includes at any point in time when the first user interface of the first application is displayed;

the while displaying the first user interface of the first application includes an entire duration in time when the first user interface of the first application is displayed; or

the maintaining display of the first user interface of the first application without displaying the respective other user interface, is the same as not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display.

Claim 7, an electronic device, corresponds to and is analyzed and rejected for substantially the same reasons as the method of Claim 1, discussed above.

Examiner notes Griffin further teaches **a display; a touch-sensitive surface; one or more processors; memory; and one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions** (Fig. 1 and paragraphs [0015], [0017] and [0074]).

Claim 8, a non-transitory computer readable storage medium, corresponds to and is analyzed and rejected for substantially the same reasons as the method of Claim 1, discussed above.

Examiner notes Griffin further teaches **a non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a display and a touch-sensitive surface** (Fig. 1 and paragraphs [0015], [0017] and [0074]).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference

claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq*. for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

5. Claims 1-14 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 10,996,787.

Although the claims at issue are not identical, they are not patentably distinct from each other because the broad limitations of the instant application are included in the specific scope of the claims in U.S. Patent No. 10,996,787.

Pertinent Art

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

a. Westerman (USPN 2009/0174679) teaches ignoring inputs and maintaining the current display interface.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTONIO J XAVIER whose telephone number is (571)270-7688. The examiner can normally be reached on M-F 530am-2pm PST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANTONIO XAVIER/
Primary Examiner, Art Unit 2623

Examiner-Initiated Interview Summary	**Application No.** 17/206,107	**Applicant(s)** Smith, Michael S		
	Examiner ANTONIO J XAVIER	**Art Unit** 2623	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ANTONIO J XAVIER	Primary Examiner	Telephonic
Patrick E. Caldwell (Reg. No.: 44,580)	Attorney	

Date of Interview: 24 September 2021

Issues Discussed:

Other

Examiner has handled many applications in this large patent family and contacted Applicant after a preliminary review of the claims to see if there was any interest to expedite examination.

Examiner asked if Applicant wanted an action on the merits or had a prepared narrow amendment ready for review similar to other applications that were examined.

Applicant provided a proposed amendment for review (see attached).

Examiner agreed the proposed amendment would overcome the current rejection but did not believe a quick decision could be made regarding allowable subject matter.

Therefore, the amendment would not be entered at this time because further search and/or consideration would be required.

☑ Attachment

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 17/206,107	Applicant(s)/Patent Under Reexamination Smith, Michael S	
	Examiner ANTONIO J XAVIER	Art Unit 2623	Page 1 of 1

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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
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*	B	US-20100159995-A1	06-2010	STALLINGS; Heath	H04M1/67	455/566
*	C	US-10996787-B1	05-2021	Smith; Michael S	G06F1/1647	1/1
*	D	US-20090174679-A1	07-2009	WESTERMAN; Wayne Carl	G06F3/04186	345/173
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
G06F3/016	09/23/2021	AX
G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	Art Unit
	ANTONIO J XAVIER	2623

Search Notes		
Search Notes	**Date**	**Examiner**
G06F3/0413	09/23/2021	AX
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G06F3/0412	09/23/2021	AX
G06F3/0414	09/23/2021	AX
G06F3/044	09/23/2021	AX
G06F3/045	09/23/2021	AX
G06F3/04883	09/23/2021	AX
G06F2203/04104	09/23/2021	AX
Reviewed patent family	09/23/2021	AX
Inventor	09/23/2021	AX
EAST	09/23/2021	AX

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

/Antonio Xavier/ Primary Examiner, Art Unit 2623	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/206,107	Smith, Michael S
	Examiner	**Art Unit**
	ANTONIO J XAVIER	2623

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/24/2021								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								

Bibliographic Data

Application No: 17/206,107

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /Antonio Xavier/ (Examiner's Signature) | (Initials)

Title: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/18/2021	345	2623	SMITH070AT_1
RULE			

APPLICANTS

P4TENTS1 LLC, Wilmington, DE,

INVENTORS

Michael S Smith, Los Altos, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 16708418 12/09/2019 PAT 10996787

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FOREIGN APPLICATIONS

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03/29/2021

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Dallas, TX 75229
UNITED STATES

FILING FEE RECEIVED

$1,040

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	
Attorney Docket Number	SMITH070AT_1

U.S.PATENTS Remove

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	8	10425284	B2	2019-09-24	Dellinger et al.	

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	Attorney Docket Number	SMITH070AT_1

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	55	20040263488	A1	2004-12-30	Martin	
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	61	20040207542	A1	2004-10-21	Chang et al.	
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	66	20050021190	A1	2005-01-27	Worrell et al.	
	67	20050027928	A1	2005-02-03	Avraham et al.	
	68	20050045540	A1	2005-03-03	Connell et al.	
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	73	20050128853	A1	2005-06-16	Ayukawa et al.	
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	77	20050231461	A1	2005-10-20	Raap et al.	
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	88	20050280746	A1	2005-12-22	North et al.	
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	92	20060001654	A1	2006-01-05	Smits	
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	95	20060022955	A1	2006-02-02	Kennedy	
	96	20060026521	A1	2006-02-02	Hotelling et al.	
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	99	20060066590	A1	2006-03-30	Ozawa et al.	
	100	20060075402	A1	2006-04-06	Neiger et al.	
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	106	20060114646	A1	2006-06-01	Koibuchi et al.	
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	110	20060139340	A1	2006-06-29	Geaghan	
	111	20060146014	A1	2006-07-06	Lehtonen	
	112	20060146032	A1	2006-07-06	Kajimoto et al.	
	113	20060167400	A1	2006-07-27	Ellingboe et al.	
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	121	20060244733	A1	2006-11-02	Geaghan	
	122	20060250377	A1	2006-11-09	Zadesky et al.	
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	165	20070176902	A1	2007-08-02	Newman et al.	
	166	20070182864	A1	2007-08-09	Stoneham et al.	
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	187	20070153215	A1	2007-07-05	Lee	
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	266	20080231605	A1	2008-09-25	Yang	
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	268	20080239857	A1	2008-10-02	Rajan et al.	
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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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Name/Print	Patrick Caldwell	Registration Number	44580

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

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Please consider the attached proposed amendment.
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Thanks,
Patrick

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1.-8. (Cancelled)

9. (New) A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a display and a touch-sensitive surface, cause the electronic device to:

display a first user interface of a first application on the display;

while displaying the first user interface of the first application, detect a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, cease to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detect a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, cease to display the first user interface of the first application and displaying the respective other user interface on the display.

10. (New) The non-transitory computer readable storage medium of claim 9, wherein: the first application is determined to be protected when the first application is operating in one of a plurality of predefined protected modes.

11. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the navigation-gesture criteria are application-switching-gesture criteria; and
the respective other user interface is another application.

12. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the navigation-gesture criteria are control-panel-gesture criteria; and
the respective other user interface is a control panel user interface.

13. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the navigation-gesture criteria are application-switcher-gesture criteria; and
the respective other user interface is an application-switcher user interface.

14. (New) The non-transitory computer readable storage medium of claim 9, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu of a control panel.

15. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the navigation-gesture criteria are application-switching-gesture criteria; and
the respective other user interface is another application.

16. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the navigation-gesture criteria are control-panel-gesture criteria; and
the respective other user interface is a control panel user interface.

17. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the navigation-gesture criteria are application-switcher-gesture criteria; and
the respective other user interface is an application-switcher user interface.

18. (New) The non-transitory computer readable storage medium of claim 14, wherein:
the first application is also determined to be protected when the first user interface of the first application is displayed via the menu, by the first user interface of the first application being displayed on the menu.

19. (New) The non-transitory computer readable storage medium of claim 9, wherein:
the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

20. (New) The non-transitory computer readable storage medium of claim 19, wherein:
the navigation-gesture criteria are application-switching-gesture criteria; and
the respective other user interface is another application.

21. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is capable of being protected and at least one other application is not capable of being protected.

22. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application appears in a first manner when protected and appears in a second manner when not protected.

23. (New) The non-transitory computer readable storage medium of claim 9, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

24. (New) The non-transitory computer readable storage medium of claim 9, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

25. (New) The non-transitory computer readable storage medium of claim 9, wherein at least one of:

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first application is protected by not being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and not being specific to the first application;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria, by the one or more navigation-gesture criteria being application-specific and being specific to the first application;

the first application is protected by one or more constraints;

the second contact on the touch-sensitive surface meets the navigation-gesture criteria;

the determination that the second input is detected is detected within a confirmation time threshold of the first input;

the first application is protected by an operating system;

the first application is not protected by being subject to the first contact meeting the one or more navigation-gesture criteria;

the first user interface of the first application is displayed without displaying any user interface of any other application;

the first user interface of the first application is not displayed without displaying any user interface of any other application;

the first user interface of the first application is displayed with another user interface of another application;

the first contact is detected before detecting the second contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even without forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

the first user interface of the first application is ceased to be displayed and the respective other user interface is displayed even before forgoing displaying the respective other user interface in response to detecting the first input by the first contact;

wherein the first application is determined to be protected based on a context in which the first contact is detected;

the one or more navigation-gesture criteria includes a single criteria;

the one or more navigation-gesture criteria includes at least one criteria;

the one or more navigation-gesture criteria includes more than one criteria;

the predefined edge region includes a contact area;

the predefined edge region includes a selection area;

the predefined edge region includes a region near an edge;

the predefined edge region includes a region at an edge;

the predefined edge region includes a region within a predetermined distance from an edge;

the predefined edge region includes a contact area near an edge of the display;

the predefined edge region includes a contact area at an edge of the display;

the predefined edge region includes a contact area within a predetermined distance from an edge of the display;

the predefined edge region includes a contact area near an edge of the touch-sensitive surface;

the predefined edge region includes a contact area at an edge of the touch-sensitive surface;

the predefined edge region includes a contact area within a predetermined distance from an edge of the touch-sensitive surface;

the predefined edge region includes a selection area;

the boundary includes a boundary of a contact area;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of an entirety of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of only a portion of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across an entirety of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met, includes movement of the first contact across only a portion of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the one or more navigation-gesture criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the one or more navigation-gesture criteria to be met;

the first application is subject to the first contact meeting the one or more navigation-gesture criteria, by ceasing to display the first user interface of the first application and displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the first application is not subject to the first contact meeting the one or more navigation-gesture criteria, by not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display in response to the first contact meeting the one or more navigation-gesture criteria;

the while displaying the first user interface of the first application includes at any point in time when the first user interface of the first application is displayed;

the while displaying the first user interface of the first application includes an entire duration in time when the first user interface of the first application is displayed; or

the maintaining display of the first user interface of the first application without displaying the respective other user interface, is the same as not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display.

26. (New) A method, comprising:

at an electronic device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

27. (New) The method of claim 26, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu.

28. (New) The method of claim 26, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

29. (New) The method of claim 26, wherein:

the navigation-gesture criteria are control-panel-gesture criteria; and

the respective other user interface is a control panel user interface.

30. (New) The method of claim 26, wherein:

the navigation-gesture criteria are application-switcher-gesture criteria; and

the respective other user interface is an application-switcher user interface.

31. (New) The method of claim 26, wherein the first user interface of the first application is configured differently based on whether the first application is protected.

32. (New) The method of claim 31, wherein the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

33. (New) The method of claim 26, wherein:

the first application is determined to be protected when the first user interface of the first application is displayed via a menu, by the first user interface of the first application being displayed on the menu.

34. (New) The method of claim 33, wherein:

the navigation-gesture criteria are application-switching-gesture criteria; and

the respective other user interface is another application.

35. (New) The method of claim 34, the first application is determined to be protected when the first user interface of the first application is displayed via a control panel menu.

36. (New) The method of claim 35, wherein the first user interface of the first application appears differently based on whether the first application is protected.

37. (New) An electronic device, comprising:

a display;

a touch-sensitive surface;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met;

in response to detecting the first input by the first contact that meets the navigation-gesture criteria:

in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface;

in accordance with a determination that the first application is protected and while display of the first user interface of the first application is maintained in response to detecting the first input by the first contact:

after forgoing displaying the respective other user interface in response to detecting the first input by the first contact, and while maintaining display of the first user interface of the first application, detecting a second input by a second contact on the touch-sensitive surface; and

in response to detecting the second input by the second contact on the touch-sensitive surface:

in accordance with a determination that the second input is detected, ceasing to display the first user interface of the first application and displaying the respective other user interface on the display.

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Doc description: Information Disclosure Statement (IDS) Filed

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	27	20090052218	A1	2009-02-26	KANG	

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	28	20090061823	A1	2009-03-05	Chu	
	29	20090065948	A1	2009-03-12	Wang	
	30	20090066660	A1	2009-03-12	Ure	
	31	20090067256	A1	2009-03-12	Bhattacharyya et al.	
	32	20090072662	A1	2009-03-19	Sadler et al.	
	33	20090073138	A1	2009-03-19	Lee et al.	
	34	20090085225	A1	2009-04-02	Park	
	35	20090085608	A1	2009-04-02	Alzheimer	
	36	20090086420	A1	2009-04-02	Stockham et al.	
	37	20090090950	A1	2009-04-09	Forbes et al.	
	38	20090091536	A1	2009-04-09	Callaghan	

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	39	20090091962	A1	2009-04-09	Chung et al.	
	40	20090103675	A1	2009-04-23	Moghaddam et al.	
	41	20090127668	A1	2009-05-21	Choi	
	42	20090128991	A1	2009-05-21	Mauritzson	
	43	20090140985	A1	2009-06-04	Liu	
	44	20090143652	A1	2009-06-04	Warburton et al.	
	45	20090153340	A1	2009-06-18	Pinder et al.	
	46	20090158152	A1	2009-06-18	Kodimer et al.	
	47	20090160781	A1	2009-06-25	Henderson et al.	
	48	20090166846	A1	2009-07-02	Pratt et al.	
	49	20090179780	A1	2009-07-16	Tambe	

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	50	20090179780	A1	2009-07-16	Tambe	
	51	20090180257	A1	2009-07-16	Park et al.	
	52	20090184809	A1	2009-07-23	Wagner et al.	
	53	20090184921	A1	2009-07-23	Scott et al.	
	54	20090197394	A1	2009-08-06	Parekh	
	55	20090206431	A1	2009-08-20	Bolken et al.	
	56	20090213066	A1	2009-08-27	Hardacker et al.	
	57	20090022256	A1	2009-01-22	Fitzgerald	
	58	20090224822	A1	2009-09-10	Alzheimer et al.	
	59	20090225053	A1	2009-09-10	HU	
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	62	20090256807	A1	2009-10-15	Nurmi	
	63	20090259806	A1	2009-10-15	Kilzer et al.	
	64	20090261457	A1	2009-10-22	Pratt	
	65	20090271731	A1	2009-10-29	Lin et al.	
	66	20090285031	A1	2009-11-19	Rajan et al.	
	67	20090289912	A1	2009-11-26	Chen et al.	
	68	20090295747	A1	2009-12-03	Hsieh et al.	
	69	20090296341	A1	2009-12-03	ELDERSHAW	
	70	20090300314	A1	2009-12-03	LaBerge et al.	
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	72	20090302484	A1	2009-12-10	Lee et al.	
	73	20090309142	A1	2009-12-17	Akram	
	74	20090315741	A1	2009-12-24	Kim	
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	76	20090319703	A1	2009-12-24	Chung	
	77	20090321861	A1	2009-12-31	Oliver et al.	
	78	20090321947	A1	2009-12-31	Pratt	
	79	20090323206	A1	2009-12-31	Oliver et al.	
	80	20090327979	A1	2009-12-31	Haverinen et al.	
	81	20090327979	A1	2009-12-31	Haverinen et al.	
	82	20090036176	A1	2009-02-05	Ure	

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	84	20090051659	A1	2009-02-26	Mickelborough	
	85	20090058829	A1	2009-03-05	Kim et al.	
	86	20090066660	A1	2009-03-12	Ure	
	87	20090073138	A1	2009-03-19	Lee et al.	
	88	20090083665	A1	2009-03-26	Anttila et al.	
	89	20090085881	A1	2009-04-02	Keam	
	90	20090086420	A1	2009-04-02	Stockham et al.	
	91	20090091536	A1	2009-04-09	Callaghan	
	92	20090143652	A1	2009-06-04	Warburton et al.	
	93	20090158152	A1	2009-06-18	Kodimer et al.	

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	97	20090231290	A1	2009-09-17	Chen	
	98	20090271731	A1	2009-10-29	Lin et al.	
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	102	20100017872	A1	2010-01-21	Goertz et al.	
	103	20100020039	A1	2010-01-28	Ricks et al.	
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	106	20100035656	A1	2010-02-11	Pan	
	107	20100039393	A1	2010-02-18	Pratt et al.	
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	113	20100005390	A1	2010-01-07	Bong	
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	117	20100085500	A1	2010-04-08	Kim	
	118	20100090973	A1	2010-04-15	Algreatly	
	119	20100097347	A1	2010-04-22	Lin	
	120	20100110748	A1	2010-05-06	Best	
	121	20100117959	A1	2010-05-13	Hong et al.	
	122	20100134429	A1	2010-06-03	You et al.	
	123	20100134448	A1	2010-06-03	Park et al.	
	124	20100149101	A1	2010-06-17	Guo et al.	
	125	20100149124	A1	2010-06-17	Kim et al.	
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	127	20100156814	A1	2010-06-24	Weber et al.	
	128	20100156818	A1	2010-06-24	Burrough et al.	
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	130	20100164745	A1	2010-07-01	Migos et al.	
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	138	20100020039	A1	2010-01-28	Ricks et al.	
	139	20100201651	A1	2010-08-12	Baucom et al.	
	140	20100206560	A1	2010-08-19	Atencio	
	141	20100207900	A1	2010-08-19	Kung et al.	
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	143	20100214239	A1	2010-08-26	Wu	
	144	20100214499	A1	2010-08-26	Sanelle et al.	
	145	20100220065	A1	2010-09-02	Ma	
	146	20100222735	A1	2010-09-02	Plahey et al.	
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	151	20100245282	A1	2010-09-30	Lai	
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	153	20100253653	A1	2010-10-07	Stambaugh et al.	
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	156	20100026640	A1	2010-02-04	Kim et al.	
	157	20100271888	A1	2010-10-28	Rajan et al.	
	158	20100277432	A1	2010-11-04	Tsai	
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	161	20100302281	A1	2010-12-02	Kim	
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	163	20100332635	A1	2010-12-30	ROGEL et al.	
	164	20100035656	A1	2010-02-11	Pan	
	165	20100045612	A1	2010-02-25	Moelne	
	166	20100045621	A1	2010-02-25	Kang et al.	
	167	20100053103	A1	2010-03-04	No et al.	
	168	20100053532	A1	2010-03-04	Lai	
	169	20100058211	A1	2010-03-04	Lee et al.	
	170	20100077829	A1	2010-04-01	Batista et al.	

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	172	20100085500	A1	2010-04-08	Kim	
	173	20100088654	A1	2010-04-08	Henhoeffer	
	174	20100090982	A1	2010-04-15	Oba et al.	
	175	20100097347	A1	2010-04-22	Lin	
	176	20100127983	A1	2010-05-27	Irani et al.	
	177	20100134429	A1	2010-06-03	You et al.	
	178	20100134448	A1	2010-06-03	Park et al.	
	179	20100149101	A1	2010-06-17	Guo et al.	
	180	20100149124	A1	2010-06-17	Kim et al.	
	181	20100164884	A1	2010-07-01	Chiu et al.	

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	183	20100188365	A1	2010-07-29	Tamaki et al.	
	184	20100194709	A1	2010-08-05	Tamaki et al.	
	185	20100201651	A1	2010-08-12	Baucom et al.	
	186	20100206560	A1	2010-08-19	Atencio	
	187	20100207900	A1	2010-08-19	Kung et al.	
	188	20100214499	A1	2010-08-26	Sanelle et al.	
	189	20100222735	A1	2010-09-02	Plahey et al.	
	190	20100225608	A1	2010-09-09	Zhou et al.	
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	194	20100277432	A1	2010-11-04	Tsai	
	195	20100328230	A1	2010-12-30	Faubert et al.	
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	198	20110012921	A1	2011-01-20	Cholewin et al.	
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	200	20110001706	A1	2011-01-06	Sanford et al.	
	201	20110018695	A1	2011-01-27	Bells et al.	
	202	20110025969	A1	2011-02-03	Chen et al.	
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	209	20110044064	A1	2011-02-24	Hu et al.	
	210	20110050576	A1	2011-03-03	Forutanpour et al.	Entire Document
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	212	20110050591	A1	2011-03-03	Kim et al.	
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	216	20110050608	A1	2011-03-03	Homma et al.	
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	221	20110066790	A1	2011-03-17	Mogul et al.	
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	228	20110107212	A1	2011-05-05	JEONG	
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	232	20110113208	A1	2011-05-12	Jouppi et al.	
	233	20110115738	A1	2011-05-19	Suzuki et al.	
	234	20110117968	A1	2011-05-19	Eromaki	
	235	20110118029	A1	2011-05-19	Lukas et al.	
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	238	20110141052	A1	2011-06-16	Bernstein et al.	
	239	20110152739	A1	2011-06-23	Roncadi et al.	
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	241	20110169745	A1	2011-07-14	Fang et al.	
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	252	20110227830	A1	2011-09-22	Chun	
	253	20110227836	A1	2011-09-22	Li et al.	
	254	20110227877	A1	2011-09-22	Chen	
	255	20110239110	A1	2011-09-29	Garrett et al.	
	256	20110248941	A1	2011-10-13	Abdo et al.	
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	3	20110260994	A1	2011-10-27	Saynac et al.	
	4	20110261002	A1	2011-10-27	Verthein	
	5	20110273394	A1	2011-11-10	Young et al.	

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	7	20110291945	A1	2011-12-01	Ewing Jr et al.	
	8	20110291953	A1	2011-12-01	Cheok et al.	
	9	20110302493	A1	2011-12-08	Runstedler et al.	
	10	20120007821	A1	2012-01-12	Zaliva	
	11	20120008436	A1	2012-01-12	Rajan et al.	
	12	20120011310	A1	2012-01-12	Rajan et al.	
	13	20120011386	A1	2012-01-12	Rajan et al.	
	14	20120013566	A1	2012-01-19	CHUNG	
	15	20120018871	A1	2012-01-26	Lee et al.	
	16	20120019448	A1	2012-01-26	Pitkanen et al.	

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	17	20120023450	A1	2012-01-26	Noto et al.	
	18	20120032876	A1	2012-02-09	Tabe	
	19	20120034954	A1	2012-02-09	Tabe	
	20	20120037878	A1	2012-02-16	Liu	
	21	20120038045	A1	2012-02-16	Lee	
	22	20120042204	A1	2012-02-16	Smith et al.	
	23	20120044172	A1	2012-02-23	Ohki et al.	
	24	20120056846	A1	2012-03-08	Zaliva	
	25	20120059976	A1	2012-03-08	Rosenband et al.	
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	29	20120070973	A1	2012-03-22	Sandhu et al.	
	30	20120074584	A1	2012-03-29	Lee et al.	
	31	20120077314	A1	2012-03-29	Park et al.	
	32	20120007821	A1	2012-01-12	Zaliva	
	33	20120081290	A1	2012-04-05	Heo	
	34	20120081290	A1	2012-04-05	Heo	
	35	20120086670	A1	2012-04-12	Teil et al.	
	36	20120102401	A1	2012-04-26	Ijas et al.	
	37	20120102401	A1	2012-04-26	Ijas et al.	
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	39	20120105367	A1	2012-05-03	Son et al.	Entire Document
	40	20120105370	A1	2012-05-03	Moore	
	41	20120106228	A1	2012-05-03	Lee	
	42	20120109037	A1	2012-05-03	Ellingboe et al.	
	43	20120109621	A1	2012-05-03	Rajan et al.	
	44	20120117507	A1	2012-05-10	Tseng et al.	
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	46	20120124281	A1	2012-05-17	Rajan et al.	
	47	20120126883	A1	2012-05-24	Juengling	
	48	20120127685	A1	2012-05-24	Corisis et al.	
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	50	20120135569	A1	2012-05-31	Corisis	
	51	20120013566	A1	2012-01-19	Chung	
	52	20120138927	A1	2012-06-07	KANG	
	53	20120140583	A1	2012-06-07	CHUNG	
	54	20120147684	A1	2012-06-14	Schakel et al.	
	55	20120154328	A1	2012-06-21	Kono	
	56	20120159387	A1	2012-06-21	OH et al.	
	57	20120159387	A1	2012-06-21	OH et al.	
	58	20120162087	A1	2012-06-28	Hou	
	59	20120162213	A1	2012-06-28	Shim et al.	
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	61	20120182249	A1	2012-07-19	Endo et al.	
	62	20120192108	A1	2012-07-26	Kolb	
	63	20120192108	A1	2012-07-26	Kolb	
	64	20120194461	A1	2012-08-02	Lim	
	65	20120194462	A1	2012-08-02	Lim	
	66	20120019448	A1	2012-01-26	Pitkanen et al.	
	67	20120201088	A1	2012-08-09	Rajan et al.	
	68	20120203958	A1	2012-08-09	Jones et al.	
	69	20120203993	A1	2012-08-09	Virgin et al.	
	70	20120204079	A1	2012-08-09	Takefman et al.	
	71	20120206165	A1	2012-08-16	Ferolito et al.	

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	72	20120212420	A1	2012-08-23	Shin	
	73	20120212420	A1	2012-08-23	Shin	
	74	20120223900	A1	2012-09-06	JIYAMA et al.	
	75	20120226924	A1	2012-09-06	Rajan et al.	
	76	20120229403	A1	2012-09-13	Jong et al.	
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	79	20120231853	A1	2012-09-13	Takahashi et al.	
	80	20120023450	A1	2012-01-26	Noto et al.	
	81	20120239874	A1	2012-09-20	Lee et al.	
	82	20120240044	A1	2012-09-20	Johnson et al.	

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	83	20120242610	A1	2012-09-27	Yasumatsu	
	84	20120244348	A1	2012-09-27	Park et al.	
	85	20120250386	A1	2012-10-04	Lee et al.	
	86	20120252426	A1	2012-10-04	Nagaoka et al.	
	87	20120252426	A1	2012-10-04	Nagaoka et al.	
	88	20120254519	A1	2012-10-04	Ellis	
	89	20120254747	A1	2012-10-04	Bocirnea	
	90	20120266072	A1	2012-10-18	Karaoguz	
	91	20120268361	A1	2012-10-25	Shotel et al.	
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	95	20120289290	A1	2012-11-15	Chae et al.	
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	97	20120290946	A1	2012-11-15	Schrock et al.	
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	99	20120293449	A1	2012-11-22	Dietz	
	100	20120299980	A1	2012-11-29	Fujikawa	
	101	20120306764	A1	2012-12-06	Kamibeppu	
	102	20120306765	A1	2012-12-06	Moore	
	103	20120306766	A1	2012-12-06	Moore	
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	106	20120312806	A1	2012-12-13	Burt et al.	
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	108	20120313888	A1	2012-12-13	Lee et al.	
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	110	20120032876	A1	2012-02-09	Tabe	
	111	20120034954	A1	2012-02-09	Tabe	
	112	20120044172	A1	2012-02-23	Ohki et al.	
	113	20120056846	A1	2012-03-08	Zaliva	
	114	20120060123	A1	2012-03-08	Smith	
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	121	20120182249	A1	2012-07-19	Endo et al.	
	122	20120182296	A1	2012-07-19	Han	
	123	20120194461	A1	2012-08-02	Lim	
	124	20120194462	A1	2012-08-02	Lim	
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	129	20120231853	A1	2012-09-13	Takahashi et al.	
	130	20120240044	A1	2012-09-20	Johnson et al.	
	131	20120242610	A1	2012-09-27	Yasumatsu	
	132	20120244348	A1	2012-09-27	Park et al.	
	133	20120254747	A1	2012-10-04	Bocirnea	
	134	20120266072	A1	2012-10-18	Karaoguz et al.	
	135	20120274662	A1	2012-11-01	Kim et al.	
	136	20120293449	A1	2012-11-22	Dietz	
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	138	20120306765	A1	2012-12-06	Moore	
	139	20120306766	A1	2012-12-06	Moore	
	140	20120306788	A1	2012-12-06	Chen et al.	
	141	20120313888	A1	2012-12-13	Lee et al.	
	142	20130002610	A1	2013-01-03	Ho et al.	
	143	20130007399	A1	2013-01-03	Smith et al.	
	144	20130009869	A1	2013-01-10	Wilensky	
	145	20130016586	A1	2013-01-17	Craig	
	146	20130016586	A1	2013-01-17	Craig	
	147	20130019076	A1	2013-01-17	Amidi et al.	
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	150	20130002610	A1	2013-01-03	Ho et al.	
	151	20130027350	A1	2013-01-31	Liaw et al.	
	152	20130027358	A1	2013-01-31	Liaw et al.	
	153	20130029764	A1	2013-01-31	Wang	
	154	20130044062	A1	2013-02-21	Bose et al.	
	155	20130050122	A1	2013-02-28	KANG et al.	
	156	20130050122	A1	2013-02-28	KANG et al.	
	157	20130050141	A1	2013-02-28	PARK et al.	
	158	20130050141	A1	2013-02-28	PARK et al.	
	159	20130054881	A1	2013-02-28	Ellis et al.	

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	160	20130055134	A1	2013-02-28	Knor	
	161	20130060994	A1	2013-03-07	Higgins et al.	
	162	20130061019	A1	2013-03-07	Fitzpatrick et al.	
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	165	20130063389	A1	2013-03-14	Moore	
	166	20130076941	A1	2013-03-28	Palanciuc et al.	
	167	20130082970	A1	2013-04-04	Frey et al.	
	168	20130082979	A1	2013-04-04	Rabu et al.	
	169	20130085215	A1	2013-04-04	SHITARA et al.	
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	172	20130009869	A1	2013-01-10	Wilensky	
	173	20130100070	A1	2013-04-25	Zheng et al.	
	174	20130100087	A1	2013-04-25	Liaw et al.	
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	176	20130103377	A1	2013-04-25	Rajan et al.	
	177	20130103897	A1	2013-04-25	Rajan et al.	
	178	20130106802	A1	2013-05-02	Liaw et al.	
	179	20130109928	A1	2013-05-02	Menzel	
	180	20130120284	A1	2013-05-16	Chen et al.	
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	182	20130120302	A1	2013-05-16	Kang et al.	
	183	20130124993	A1	2013-05-16	Daisy	
	184	20130125322	A1	2013-05-23	Sakashita et al.	
	185	20130125803	A1	2013-05-23	Tseng	
	186	20130127765	A1	2013-05-23	Behdasht et al.	Entire Document
	187	20130132661	A1	2013-05-23	Schakel et al.	
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	189	20130132838	A1	2013-05-23	Daisy	
	190	20130141388	A1	2013-06-06	Ludwig et al.	
	191	20130154968	A1	2013-06-20	Tomimori	
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	195	20130160514	A1	2013-06-27	Mitze	
	196	20130160514	A1	2013-06-27	Mitze	
	197	20130169981	A1	2013-07-04	Takahashi	
	198	20130174179	A1	2013-07-04	Park et al.	Entire Document
	199	20130178701	A1	2013-07-11	Pless et al.	
	200	20130181928	A1	2013-07-18	Li	
	201	20130181931	A1	2013-07-18	Kinoshita	
	202	20130188336	A1	2013-07-25	Yuan et al.	
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	204	20130191585	A1	2013-07-25	Rajan et al.	
	205	20130205102	A1	2013-08-08	Jones et al.	
	206	20130021285	A1	2013-01-24	Kimura et al.	
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	208	20130215064	A1	2013-08-22	Cholewin et al.	
	209	20130238849	A1	2013-09-12	Amer et al.	
	210	20130254456	A1	2013-09-26	Chen et al.	
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	212	20130268853	A1	2013-10-10	Gommier et al.	
	213	20130268853	A1	2013-10-10	Gommier et al.	
	214	20130027350	A1	2013-01-31	Liaw et al.	

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	216	20130275795	A1	2013-10-17	Ellis et al.	
	217	20130282962	A1	2013-10-24	Rub et al.	
	218	20130307809	A1	2013-11-21	Sudou	
	219	20130307827	A1	2013-11-21	Reisman et al.	
	220	20130321317	A1	2013-12-05	Hirukawa	
	221	20130332796	A1	2013-12-12	Ellis	
	222	20130332876	A1	2013-12-12	Johnson et al.	
	223	20130335357	A1	2013-12-19	Hou	
	224	20130044062	A1	2013-02-21	Bose et al.	
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	227	20130063389	A1	2013-03-14	Moore	
	228	20130076649	A1	2013-03-28	Myers et al.	
	229	20130076941	A1	2013-03-28	Palanciuc et al.	
	230	20130082970	A1	2013-04-04	Frey et al.	
	231	20130082979	A1	2013-04-04	Rabu et al.	
	232	20130085215	A1	2013-04-04	Shitara et al.	
	233	20130100070	A1	2013-04-25	Zheng et al.	
	234	20130100087	A1	2013-04-25	Liaw et al.	
	235	20130102371	A1	2013-04-25	Silva et al.	
	236	20130106802	A1	2013-05-02	Liaw et al.	

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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /AX/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	11,334	g06f3/0416.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L4	15,705	g06f3/016.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L5	24,118	g06f3/0412.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L6	2,289	g06f3/0414.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L7	12,706	g06f3/044.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L8	4,900	g06f3/045.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L9	31,526	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L10	5,338	g06f2203/04104.cpc.	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L11	82,108	L3 or L4 or L5 or L6 or L7 or L8 or L9 or L10	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L12	47	L11 AND (ignor$3 WITH (flick or swipe or gesture) WITH edge)	US-PGPUB; USPAT	ADJ	ON	2021/09/23 13:48
L13	0	(("SMITH") near3 ("Michael")).INV. AND ("not" displaying).clm.	US-PGPUB; USPAT; USOCR	ADJ	ON	2021/09/23 13:50
L14	4	(("SMITH") near3 ("Michael")).INV. AND (maintaining display).clm.	US-PGPUB; USPAT; USOCR	ADJ	ON	2021/09/23 13:51
S1	0	"15719406"	US-PGPUB; USPAT	ADJ	ON	2017/12/12 12:33
S2	0	"15072351"	US-PGPUB; USPAT	ADJ	ON	2017/12/12 12:36
S3	2	"13567004"	US-PGPUB; USPAT	ADJ	ON	2017/12/12 12:36
S4	3,560	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2017/12/12 12:40
S5	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:21

		or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.				
S6	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:21
S7	27	S5 or S6	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:21
S8	990	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:25
S9	782	S8 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or short message) or (social network))	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:26
S10	0	S4 AND S9	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:26
S11	0	S4 AND S8	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:27
S12	901	S4 AND touch	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:27
S13	508	S12 AND pressure	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:27
S14	36	S13 AND menu	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:27
S15	244	S4 AND menu	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:27
S16	133	S4 AND menu AND touch	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:27
S17	97	S16 NOT S14	US-PGPUB; USPAT	ADJ	ON	2017/12/12 13:41
S18	0	(back$1touch settings)	US-PGPUB; USPAT	ADJ	ON	2017/12/13 12:27
S19	2	(back$1touch near settings)	US-PGPUB; USPAT	ADJ	ON	2017/12/13 12:31

S20	3,561	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2017/12/14 09:58
S21	82	S20 AND (touch$3 AND menu AND (social or sharing))	US-PGPUB; USPAT; USOCR	ADJ	ON	2017/12/14 09:58
S22	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$).did.	US-PGPUB	ADJ	ON	2017/12/14 11:30
S23	0	S22 AND ((pressure or magnitude) WITH (touch))	US-PGPUB; USPAT	ADJ	ON	2017/12/14 11:30
S24	0	S22 AND ((pressure or magnitude))	US-PGPUB; USPAT	ADJ	ON	2017/12/14 11:30
S25	120	(menu) WITH (social media) WITH (shar$3)	US-PGPUB; USPAT	ADJ	ON	2017/12/14 13:58
S26	73,418	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	US-PGPUB; USPAT	ADJ	ON	2017/12/14 18:39
S27	3,561	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2017/12/14 18:40
S28	69	S26 AND S27	US-PGPUB; USPAT	ADJ	ON	2017/12/14 18:40
S29	1,879	touch WITH (pressure or magnitude) WITH thresholds	US-PGPUB; USPAT	ADJ	ON	2017/12/14 18:59
S30	4	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	US-PGPUB; USPAT	ADJ	ON	2017/12/14 18:59
S31	62	("5745719").URPN.	USPAT	ADJ	ON	2017/12/14 19:20
S32	5	"11038590"	USPAT	ADJ	ON	2017/12/14 19:21
S33	1	"20060161871".pn.	US-PGPUB; USPAT	ADJ	ON	2017/12/14 19:22
S34	1	"20060026535".pn.	US-PGPUB; USPAT	ADJ	ON	2017/12/14 19:24
S35	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$	US-PGPUB; USPAT	ADJ	ON	2017/12/14 19:51

		or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.				
S36	57,422	(touch WITH pressure)	US-PGPUB; USPAT	ADJ	ON	2017/12/14 19:51
S37	5	S35 and S36	US-PGPUB; USPAT	ADJ	ON	2017/12/14 19:51
S38	45	(social network or social application) WITH (shar$3 object)	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:22
S39	9,596	(social network or social application) WITH (post)	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:37
S40	2,866	S39 AND (SMS and e$1mail)	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:37
S41	196	S40 AND (menu WITH GUI)	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:37
S42	18	S41 AND (touch WITH (pressure or magnitude))	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:38
S43	37	(GUI or menu) WITH (pressure or magnitude) WITH (context)	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:50
S44	3	"12597684"	US-PGPUB; USPAT	ADJ	ON	2017/12/15 20:52
S45	581	((context sensitive or context$1sensitive) WITH (icon))	US-PGPUB; USPAT	ADJ	ON	2017/12/16 16:13
S46	7	S45 AND (pressure WITH touch)	US-PGPUB; USPAT	ADJ	ON	2017/12/16 16:15
S47	13	menu WITH historical usage	US-PGPUB; USPAT	ADJ	ON	2017/12/18 13:40
S48	1	"8191015".pn.	US-PGPUB; USPAT	ADJ	ON	2017/12/18 13:44
S49	1	"20080065991".pn. AND (menu WITH usage)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 13:44
S50	6,827	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	US-PGPUB; USPAT	ADJ	ON	2017/12/18 19:20
S51	6	S50 WITH (touch$3 WITH menu)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 19:21
S52	12	S50 SAME (touch$3 WITH menu)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 19:22
S53	233	S50 AND (touch$3 WITH menu)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 19:39
S54	165	S50 AND (touch WITH pressure)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 20:34
S55	8,887	G06F3/04847.cpc.	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:43

S56	10,393	G06F3/04817.cpc.	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:44
S57	23,568	g06f3/0482.cpc.	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:44
S58	18,904	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:44
S59	46,941	S55 or S56 or S57 or S58	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:44
S60	6,344	S59 AND (pressure WITH touch)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:44
S61	2,168	S60 AND (touch WITH menu)	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:44
S62	141,649	(pressure WITH (magnitude or threshold))	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:45
S63	465	S62 AND S61	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:45
S64	30	S63 AND S50	US-PGPUB; USPAT	ADJ	ON	2017/12/18 21:47
S65	100	(slide WITH gesture WITH menu)	US-PGPUB; USPAT	ADJ	ON	2017/12/22 21:32
S66	3	S65 AND (slide WITH pressure)	US-PGPUB; USPAT	ADJ	ON	2017/12/22 21:39
S67	6	S65 AND (slide SAME pressure)	US-PGPUB; USPAT	ADJ	ON	2017/12/22 21:41
S68	0	"15072354"	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:52
S69	3,580	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2018/01/20 17:52
S70	11	S69 AND (intermediate state)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:52
S71	19	S69 AND (gesture WITH menu)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:54
S72	9,007	G06F3/04847.cpc.	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:56
S73	10,547	G06F3/04817.cpc.	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:56
S74	23,888	g06f3/0482.cpc.	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:56
S75	19,105	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:56
S76	47,534	(S72 or S73 or S74 or S75)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:56

S77	843	S76 AND (intermediate WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:57
S78	15	S76 AND (intermediate WITH (pressure or signal or state) WITH menu)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 17:57
S79	208	("20010005692" | "20010043291" | "20020002629" | "20020005111" | "20020008691" | "20020033919" | "20020045854" | "20020085952" | "20020116952" | "20020116959" | "20020118180" | "20020130832" | "20020180763" | "20030117408" | "20030123328" | "20030147041" | "20030151589" | "20030217972" | "20030232192" | "20030235452" | "20040084372" | "20040108995" | "20040109788" | "20040121855" | "20040191509" | "20040207542" | "20040212598" | "20040239624" | "20040263488" | "20050045540" | "20050099403" | "20050231461" | "20050242034" | "20050264521" | "20050280746" | "20060001654" | "20060001800" | "20060033701" | "20060077186" | "20060107719" | "20060138983" | "20060146032" | "20060167400" | "20060179088" | "20060195064" | "20060197736" | "20060197737" | "20060209039" | "20060238495" | "20060260711" | "20060262099" | "20060284874" | "20070008064" | "20070035526" | "20070040814" | "20070070047" | "20070085837" | "20070103454" | "20070137901" | "20070146313" | "20070148371" | "20070153215" | "20070176902" | "20070182864" | "20070195029" | "20070229477" | "20070237170" | "20070262967" | "20080007675" | "20080018613" | "20080024459" | "20080024712" | "20080060854" | "20080062169" | "20080068343" | "20080094367" | "20080100584" | "20080105600" | "20080130910" | "20080136790" | "20080158171" | "20080204427" | "20080210843" | "20080211786" | "20080215192" | "20080252607" | "20080252616" | "20080259046" | "20080295839" | "20080304431" | "20090002312" | "20090022256" | "20090036176" | "20090046110" | "20090051659" | "20090066660" |	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:23

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		"20120313888" | "20130002610" | "20130009869" | "20130021285" | "20130021295" | "20130027350").PN.				
S80	234	("20130124993" | "20130125322" | "20130127765" | "20130132838" | "20130141388" | "20130181928" | "20130181931" | "20130188336" | "20130215064" | "20130307809" | "20130307827" | "20130321317" | "20130332876" | "20130335357" | "20140028601" | "20140057102" | "20140066139" | "20140096092" | "20140099235" | "20140104219" | "20140104220" | "20140132548" | "20140132549" | "20140134433" | "20140134434" | "20140139473" | "20140168128" | "20140191962" | "20140208248" | "20140210786" | "20140340358" | "20140368455" | "20150068526" | "20150197670" | "20150234518" | "20150253609" | "3633322" | "3738166" | "3772685" | "3777222" | "4293734" | "4296756" | "4302011" | "4353552" | "4524421" | "4554419" | "4636632" | "4644101" | "4770281" | "5241308" | "5247434" | "5276787" | "5305423" | "5309172" | "5311302" | "5343650" | "5386219" | "5448263" | "5486286" | "5487827" | "5566096" | "5680160" | "5742894" | "5743859" | "5744027" | "5838244" | "5856822" | "5947334" | "5999892" | "6108064" | "6118435" | "6141000" | "6193152" | "6283763" | "6284131" | "6337681" | "6351271" | "6392638" | "6417845" | "6441807" | "6509847" | "6526315" | "6533757" | "6567102" | "6626013" | "6636203" | "6689947" | "6721019" | "6738514" | "6747636" | "6776546" | "6791640" | "6801211" | "6879318" | "6880998" | "6888537" | "6917282" | "6919927" | "6933991" | "6961015" | "6967903" | "7030854" | "7097903" | "7098776" | "7122149" | "7138984" | "7205983" | "7254973" | "7289113" | "7303680" | "7312784" | "7312791" | "7315336" | "7318892" | "7405779" | "7423557" | "7437221" | "7535463" | "7626579" | "7639239" | "7649577" | "7649605" | "7659885" | "7675580" | "7692627" | "7692637" | "7701329" | "7705824" | "7738068" |	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:24

		"7755612" | "7903096" | "7932893" | "7952566" | "7973777" | "7973778" | "7982721" | "8022933" | "8057419" | "8068021" | "8072430" | "8094134" | "8094673" | "8102496" | "8184228" | "8188982" | "8199116" | "8207945" | "8209628" | "8223799" | "8228309" | "8253699" | "8269731" | "8269733" | "8270148" | "8279361" | "8286102" | "8310452" | "8319743" | "8325143" | "8334835" | "8334850" | "8345018" | "8349228" | "8373675" | "8384674" | "8411039" | "8416210" | "8424590" | "8427434" | "8451238" | "8471824" | "8477111" | "8479110" | "8487900" | "8493384" | "8497884" | "8508494" | "8542193" | "8542209" | "8553012" | "8564559" | "8587542" | "8624851" | "8624867" | "8638311" | "8648839" | "8654104" | "8674947" | "8692815" | "8698777" | "8717303" | "8723826" | "8727557" | "8743076" | "8745514" | "8754862" | "8760408" | "8780089" | "8816993" | "8854317" | "8866785" | "8872798" | "8878809" | "8878810" | "8884913" | "8896575" | "8913031" | "8917262" | "8947381" | "8970540" | "8976128" | "8982081" | "8988364" | "9003591" | "9013414" | "9018030" | "9030427" | "9035897" | "9041679" | "9045670" | "9046999" | "9063597" | "9069204" | "9069416" | "9069460" | "9092129" | "9098193" | "9116609" | "9125630" | "9130651" | "9134880" | "9152258" | "9152288" | "RE41716").PN.				
S81	442	S79 or S80	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:24
S82	17	S81 AND (intermediate WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:24
S83	297	S81 AND (second WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:26
S84	58	S81 AND (second WITH (pressure or signal or state) WITH third)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:26
S85	1	S81 AND (second WITH (pressure or signal or state) WITH third) WITH menu	US-PGPUB; USPAT	ADJ	ON	2018/01/20 18:26
S86	1,632	g06f2203/04105.cpc.	US-PGPUB; USPAT	ADJ	ON	2018/01/20 19:35
S87	302	S86 AND (second WITH (pressure or signal or state) WITH third)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 19:35

S88	302	S86 AND (second WITH (pressure or signal or state) WITH third)	US-PGPUB; USPAT	ADJ	ON	2018/01/20 19:35
S89	1	S86 AND (second WITH (pressure or signal or state) WITH third) WITH menu	US-PGPUB; USPAT	ADJ	ON	2018/01/20 19:35
S90	50	S86 AND (intermediate WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2018/01/20 19:36
S91	0	"15072354"	US-PGPUB; USPAT	ADJ	ON	2018/08/08 14:49
S92	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	US-PGPUB; USPAT	ADJ	ON	2018/09/07 17:56
S97	1	"3659229".pn.	US-PGPUB; USPAT	ADJ	ON	2018/12/28 10:31
S98	1	"15072354"	US-PGPUB; USPAT	ADJ	ON	2018/12/28 11:22
S101	1	"10133397".pn.	US-PGPUB; USPAT	ADJ	ON	2019/01/04 13:09
S102	3,794	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2019/01/04 17:47
S111	0	"16377142"	US-PGPUB; USPAT	ADJ	ON	2019/07/05 17:13
S112	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	US-PGPUB; USPAT	ADJ	ON	2019/07/07 11:06
S113	344	(virtual layer).clm.	US-PGPUB; USPAT	ADJ	ON	2019/07/07 11:45
S114	1	"3659229".pn.	US-PGPUB; USPAT	ADJ	ON	2019/08/23 12:32
S115	0	"2010175805".pn.	US-PGPUB; USPAT	ADJ	ON	2019/08/23 12:35
S116	1	"20110175805".pn.	US-PGPUB; USPAT	ADJ	ON	2019/08/23 12:35
S117	2,647	(pressure or magnitude) WITH (selection WITH (size))	US-PGPUB; USPAT	ADJ	ON	2019/08/26 12:38
S118	87	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	US-PGPUB; USPAT	ADJ	ON	2019/08/26 12:39

S119	2	"14144140"	US-PGPUB; USPAT	ADJ	ON	2019/08/26 12:52
S120	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2019/08/26 12:52
S121	3,953	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2019/08/27 10:25
S122	33	S121 AND (scal$3).clm.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:25
S123	12,635	G06F3/04847.cpc.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:29
S124	14,233	G06F3/04817.cpc.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:29
S125	32,534	g06f3/0482.cpc.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:29
S126	24,788	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:29
S127	62,711	(S123 or S124 or S125 or S126)	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:29
S128	2,317	S127 AND (scal$3).clm.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:29
S129	82	S127 AND (scal$3 near object).clm.	US-PGPUB; USPAT	ADJ	ON	2019/08/27 10:30
S130	1	(pressure or magnitude) WITH (touch or gesture) WITH (invers$2 near proportional)	US-PGPUB; USPAT	ADJ	ON	2019/11/29 10:41
S131	570	(pressure or magnitude) WITH (invers$2 near proportional)	US-PGPUB; USPAT	ADJ	ON	2019/11/29 10:41
S132	5	S131 SAME (touch or gesture)	US-PGPUB; USPAT	ADJ	ON	2019/11/29 10:41
S133	2,751	(pressure or magnitude or touch) WITH (threshold) WITH (invers$3 or revers$3)	US-PGPUB; USPAT	ADJ	ON	2019/11/29 11:01
S134	2,645	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	US-PGPUB; USPAT	ADJ	ON	2019/11/29 11:14
S135	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	US-PGPUB; USPAT	ADJ	ON	2019/11/29 11:14
S136	0	"13567004".an.	US-PGPUB; USPAT	ADJ	ON	2019/11/29 11:15
S137	26	"13567004"	US-PGPUB; USPAT	ADJ	ON	2019/11/29 11:15

S138	13,453	(inversely near (related or proportional)) WITH (pressure or magnitude)	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:22
S139	212	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:23
S140	0	"6323846".pn. AND (invers$2)	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:34
S141	0	"09236513".an. AND (invers$2)	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:34
S142	1	"6323846".pn.	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:35
S143	0	"6323846".pn. AND (invers$2)	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:35
S144	1	"6323846".pn. AND (inversely)	US-PGPUB; USPAT	ADJ	ON	2019/12/03 19:35
S152	1	"6323846".pn. AND (invers$3)	US-PGPUB; USPAT	ADJ	ON	2019/12/05 23:29
S153	1	"9417754".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/01/16 20:06
S154	1	"16377142" AND watch	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/01/29 12:20
S155	1	"15719406"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S156	16	"15072351"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S157	29	"13567004"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S158	4,073	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:44
S159	19	(US-20090231290-$ or US-20070268261-$ or US-20060197750-$ or US-20060044281-$ or US-20030234768-$ or US-20080259046-$ or US-20110059777-$ or US-20080088602-$ or US-20110260984-$ or US-20100328230-$ or US-20070273671-$ or US-20070236470-$ or US-20110084921-$ or US-20110057889-$ or US-20110045813-$ or US-20100045621-$).did. or (US-6020878-$ or US-5729219-$ or US-8730199-$).did.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44

S160	9	(US-20100058211-$ or US-20130076649-$ or US-20110261002-$ or US-20080146285-$ or US-20100035656-$ or US-20120060123-$ or US-20110059777-$ or US-20130321340-$ or US-20110291945-$).did.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S161	27	S159 or S160	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S162	1,511	touch screen AND (vibrate or vibrator) AND (pressure) AND (menu) AND ((launch$3 or open$3) WITH (program or application or software))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S163	1,221	S162 AND ((electronic$1mail or electronic mail or e$1mail) or (SMS or short message) or (social network))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S164	18	S158 AND S163	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S165	18	S158 AND S162	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S166	1,079	S158 AND touch	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S167	606	S166 AND pressure	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S168	67	S167 AND menu	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S169	295	S158 AND menu	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S170	178	S158 AND menu AND touch	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S171	111	S170 NOT S168	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S172	0	(back$1touch settings)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S173	29	(back$1touch near settings)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S174	4,073	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:44
S175	123	S174 AND (touch$3 AND menu AND (social or sharing))	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:44
S176	6	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-	US-PGPUB	ADJ	ON	2020/02/01 10:44

		20110025842-$ or US-20080177662-$).did.				
S177	0	S176 AND ((pressure or magnitude) WITH (touch))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S178	0	S176 AND ((pressure or magnitude))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S179	209	(menu) WITH (social media) WITH (shar$3)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S180	95,945	(custom or programmable) WITH (gesture or input) WITH (application or program or function)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S181	4,073	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:44
S182	83	S180 AND S181	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S183	2,900	touch WITH (pressure or magnitude) WITH thresholds	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S184	10	touch WITH (pressure or magnitude) WITH thresholds WITH (context)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S185	71	("5745719").URPN.	USPAT	ADJ	ON	2020/02/01 10:44
S186	6	"11038590"	USPAT	ADJ	ON	2020/02/01 10:44
S187	1	"20060161871".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S188	1	"20060026535".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S189	15	(US-20140053116-$ or US-20110302493-$ or US-20110153653-$ or US-20110096174-$ or US-20110025842-$ or US-20080177662-$ or US-20130291126-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$).did. or (US-9524042-$ or US-5745719-$).did.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S190	76,329	(touch WITH pressure)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S191	5	S189 and S190	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S192	57	(social network or social application) WITH (shar$3 object)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44

S193	14,100	(social network or social application) WITH (post)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S194	4,005	S193 AND (SMS and e$1mail)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S195	268	S194 AND (menu WITH GUI)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S196	29	S195 AND (touch WITH (pressure or magnitude))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S197	51	(GUI or menu) WITH (pressure or magnitude) WITH (context)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S198	3	"12597684"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S199	626	((context sensitive or context$1sensitive) WITH (icon))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S200	8	S199 AND (pressure WITH touch)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S201	18	menu WITH historical usage	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S202	1	"8191015".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S203	1	"20080065991".pn. AND (menu WITH usage)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S204	10,465	(social network or social media) WITH (shar$3 WITH (object or link or image or photo))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:44
S205	9	S204 WITH (touch$3 WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S206	19	S204 SAME (touch$3 WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S207	396	S204 AND (touch$3 WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S208	278	S204 AND (touch WITH pressure)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S209	13,783	G06F3/04847.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S210	15,352	G06F3/04817.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S211	35,168	g06f3/0482.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S212	26,419	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S213	67,346	S209 or S210 or S211 or S212	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45

S214	9,404	S213 AND (pressure WITH touch)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S215	3,375	S214 AND (touch WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S216	170,031	(pressure WITH (magnitude or threshold))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S217	1,011	S216 AND S215	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S218	60	S217 AND S204	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S219	185	(slide WITH gesture WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S220	9	S219 AND (slide WITH pressure)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S221	36	S219 AND (slide SAME pressure)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S222	10	"15072354"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S223	4,073	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:45
S224	12	S223 AND (intermediate state)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S225	48	S223 AND (gesture WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S226	13,783	G06F3/04847.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S227	15,352	G06F3/04817.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S228	35,168	g06f3/0482.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S229	26,419	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S230	67,346	(S226 or S227 or S228 or S229)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S231	1,254	S230 AND (intermediate WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S232	20	S230 AND (intermediate WITH (pressure or signal or state) WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S233	208	("20010005692" | "20010043291" | "20020002629" | "20020005111" | "20020008691" | "20020033919" | "20020045854" | "20020085952" |	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45

		"20020116952" | "20020116959" | "20020118180" | "20020130832" | "20020180763" | "20030117408" | "20030123328" | "20030147041" | "20030151589" | "20030217972" | "20030232192" | "20030235452" | "20040084372" | "20040108995" | "20040109788" | "20040121855" | "20040191509" | "20040207542" | "20040212598" | "20040239624" | "20040263488" | "20050045540" | "20050099403" | "20050231461" | "20050242034" | "20050264521" | "20050280746" | "20060001654" | "20060001800" | "20060033701" | "20060077186" | "20060107719" | "20060138983" | "20060146032" | "20060167400" | "20060179088" | "20060195064" | "20060197736" | "20060197737" | "20060209039" | "20060238495" | "20060260711" | "20060262099" | "20060284874" | "20070008064" | "20070035526" | "20070040814" | "20070070047" | "20070085837" | "20070103454" | "20070137901" | "20070146313" | "20070148371" | "20070153215" | "20070176902" | "20070182864" | "20070195029" | "20070229477" | "20070237170" | "20070262967" | "20080007675" | "20080018613" | "20080024459" | "20080024712" | "20080060854" | "20080062169" | "20080068343" | "20080094367" | "20080100584" | "20080105600" | "20080130910" | "20080136790" | "20080158171" | "20080204427" | "20080210843" | "20080211786" | "20080215192" | "20080252607" | "20080252616" | "20080259046" | "20080295839" | "20080304431" | "20090002312" | "20090022256" | "20090036176" | "20090046110" | "20090051659" | "20090066660" | "20090073138" | "20090086420" | "20090091536" | "20090143652" | "20090158152" | "20090160781" | "20090213066" | "20090225053" | "20090271731" | "20090289912" | "20090295747" | "20100005390" | "20100017872" | "20100020039" | "20100026640" | "20100035656" | "20100045612" | "20100053103" |			

		"20100053532" | "20100077829" | "20100079398" | "20100085500" | "20100097347" | "20100134429" | "20100134448" | "20100149101" | "20100149124" | "20100164884" | "20100188365" | "20100194709" | "20100201651" | "20100206560" | "20100207900" | "20100214499" | "20100222735" | "20100225608" | "20100259490" | "20100277432" | "20110001706" | "20110007023" | "20110012921" | "20110025969" | "20110037726" | "20110044064" | "20110050591" | "20110050592" | "20110050593" | "20110050594" | "20110050608" | "20110051334" | "20110063248" | "20110088416" | "20110102336" | "20110102347" | "20110105446" | "20110109573" | "20110115738" | "20110118029" | "20110122084" | "20110152739" | "20110169775" | "20110175845" | "20110181552" | "20110210942" | "20110210943" | "20110227836" | "20110227877" | "20110239110" | "20110248941" | "20110254793" | "20110260994" | "20110273394" | "20110273396" | "20110291953" | "20120007821" | "20120013566" | "20120019448" | "20120023450" | "20120032876" | "20120034954" | "20120044172" | "20120056846" | "20120086670" | "20120105367" | "20120105370" | "20120109037" | "20120154328" | "20120162087" | "20120182249" | "20120194461" | "20120194462" | "20120223900" | "20120229403" | "20120229404" | "20120229405" | "20120231853" | "20120240044" | "20120242610" | "20120244348" | "20120254747" | "20120266072" | "20120274662" | "20120293449" | "20120306764" | "20120306765" | "20120306766" | "20120313888" | "20130002610" | "20130009869" | "20130021285" | "20130021295" | "20130027350").PN.				
S234	234	("20130124993" | "20130125322" | "20130127765" | "20130132838" | "20130141388" | "20130181928" | "20130181931" | "20130188336" | "20130215064" | "20130307809" |	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45

		"20130307827" | "20130321317" | "20130332876" | "20130335357" | "20140028601" | "20140057102" | "20140066139" | "20140096092" | "20140099235" | "20140104219" | "20140104220" | "20140132548" | "20140132549" | "20140134433" | "20140134434" | "20140139473" | "20140168128" | "20140191962" | "20140208248" | "20140210786" | "20140340358" | "20140368455" | "20150068526" | "20150197670" | "20150234518" | "20150253609" | "3633322" | "3738166" | "3772685" | "3777222" | "4293734" | "4296756" | "4302011" | "4353552" | "4524421" | "4554419" | "4636632" | "4644101" | "4770281" | "5241308" | "5247434" | "5276787" | "5305423" | "5309172" | "5311302" | "5343650" | "5386219" | "5448263" | "5486286" | "5487827" | "5566096" | "5680160" | "5742894" | "5743859" | "5744027" | "5838244" | "5856822" | "5947334" | "5999892" | "6108064" | "6118435" | "6141000" | "6193152" | "6283763" | "6284131" | "6337681" | "6351271" | "6392638" | "6417845" | "6441807" | "6509847" | "6526315" | "6533757" | "6567102" | "6626013" | "6636203" | "6689947" | "6721019" | "6738514" | "6747636" | "6776546" | "6791640" | "6801211" | "6879318" | "6880998" | "6888537" | "6917282" | "6919927" | "6933991" | "6961015" | "6967903" | "7030854" | "7097903" | "7098776" | "7122149" | "7138984" | "7205983" | "7254973" | "7289113" | "7303680" | "7312784" | "7312791" | "7315336" | "7318892" | "7405779" | "7423557" | "7437221" | "7535463" | "7626579" | "7639239" | "7649577" | "7649605" | "7659885" | "7675580" | "7692627" | "7692637" | "7701329" | "7705824" | "7738068" | "7755612" | "7903096" | "7932893" | "7952566" | "7973777" | "7973778" | "7982721" | "8022933" | "8057419" | "8068021" | "8072430" | "8094134" | "8094673" | "8102496" | "8184228" | "8188982" | "8199116" | "8207945" | "8209628" | "8223799" | "8228309" | "8253699" | "8269731" | "8269733" | "8270148" | "8279361" | "8286102" |			

		"8310452" | "8319743" | "8325143" | "8334835" | "8334850" | "8345018" | "8349228" | "8373675" | "8384674" | "8411039" | "8416210" | "8424590" | "8427434" | "8451238" | "8471824" | "8477111" | "8479110" | "8487900" | "8493384" | "8497884" | "8508494" | "8542193" | "8542209" | "8553012" | "8564559" | "8587542" | "8624851" | "8624867" | "8638311" | "8648839" | "8654104" | "8674947" | "8692815" | "8698777" | "8717303" | "8723826" | "8727557" | "8743076" | "8745514" | "8754862" | "8760408" | "8780089" | "8816993" | "8854317" | "8866785" | "8872798" | "8878809" | "8878810" | "8884913" | "8896575" | "8913031" | "8917262" | "8947381" | "8970540" | "8976128" | "8982081" | "8988364" | "9003591" | "9013414" | "9018030" | "9030427" | "9035897" | "9041679" | "9045670" | "9046999" | "9063597" | "9069204" | "9069416" | "9069460" | "9092129" | "9098193" | "9116609" | "9125630" | "9130651" | "9134880" | "9152258" | "9152288" | "RE41716").PN.				
S235	442	S233 or S234	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S236	17	S235 AND (intermediate WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S237	297	S235 AND (second WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S238	58	S235 AND (second WITH (pressure or signal or state) WITH third)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S239	1	S235 AND (second WITH (pressure or signal or state) WITH third) WITH menu	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S240	3,223	g06f2203/04105.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S241	781	S240 AND (second WITH (pressure or signal or state) WITH third)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S242	781	S240 AND (second WITH (pressure or signal or state) WITH third)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S243	12	S240 AND (second WITH (pressure or signal or state) WITH third) WITH menu	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S244	147	S240 AND (intermediate WITH (pressure or signal or state))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45

S245	10	"15072354"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S246	14	(US-20130162667-$ or US-20110145764-$ or US-20100313166-$ or US-20080219493-$ or US-20040150644-$ or US-20120306788-$ or US-20110175805-$ or US-20100026640-$ or US-20080178126-$ or US-20110196935-$ or US-20090207175-$ or US-20120225413-$ or US-20080204427-$ or US-20080024459-$).did.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S247	1	"3659229".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S248	10	"15072354"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S249	1	"10133397".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S250	4,073	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:45
S251	1	"16377142"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S252	10	(antonio near2 xavier).xa,xp. AND (virtual layer).clm.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S253	360	(virtual layer).clm.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S254	1	"3659229".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S255	0	"2010175805".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S256	1	"20110175805".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S257	2,720	(pressure or magnitude) WITH (selection WITH (size))	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S258	90	(pressure or magnitude or intensity) WITH (selection WITH (size)) WITH (touch or finger)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S259	2	"14144140"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S260	8	("20010024195" | "20080189629" | "20100153879" | "20110239110" | "20130147718" | "20130191785" | "20150149964" | "9244601").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:45

S261	4,073	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:45
S262	36	S261 AND (scal$3).clm.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S263	13,783	G06F3/04847.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S264	15,352	G06F3/04817.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S265	35,168	g06f3/0482.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S266	26,419	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S267	67,346	(S263 or S264 or S265 or S266)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S268	2,491	S267 AND (scal$3).clm.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S269	88	S267 AND (scal$3 near object).clm.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S270	2	(pressure or magnitude) WITH (touch or gesture) WITH (invers$2 near proportional)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S271	573	(pressure or magnitude) WITH (invers$2 near proportional)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S272	6	S271 SAME (touch or gesture)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S273	2,783	(pressure or magnitude or touch) WITH (threshold) WITH (invers$3 or revers$3)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S274	2,677	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S275	14	(pressure or magnitude) WITH (threshold) WITH (invers$3 or revers$3) WITH (touch)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S276	0	"13567004".an.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S277	29	"13567004"	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S278	13,560	(inversely near (related or proportional)) WITH (pressure or magnitude)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S279	217	(inversely near (related or proportional)) WITH (pressure or magnitude) WITH (zoom$3 or scal$3)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S280	0	"6323846".pn. AND (invers$2)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45

S281	0	"09236513".an. AND (invers$2)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S282	1	"6323846".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S283	0	"6323846".pn. AND (invers$2)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S284	1	"6323846".pn. AND (inversely)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S285	1	"6323846".pn. AND (invers$3)	US-PGPUB; USPAT	ADJ	ON	2020/02/01 10:45
S286	1	"9417754".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:45
S287	1	"16377142" AND watch	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/02/01 10:45
S309	3	"20060026535".pn. or "20110248941".pn. or "20100153879".pn.	US-PGPUB; USPAT	ADJ	ON	2020/02/03 09:30
S310	160	(gesture WITH boundary WITH edge)	US-PGPUB; USPAT	ADJ	ON	2020/03/08 17:45
S311	214	(gesture WITH menu WITH edge)	US-PGPUB; USPAT	ADJ	ON	2020/03/08 17:56
S312	8	(menu WITH (cross$1through or cross through or cross$1over or cross over) WITH (select or selection))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 09:46
S313	487	(menu WITH (boundary) WITH (select or selection))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 09:47
S314	20	(menu WITH (boundary) WITH (select or selection) WITH (movement))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 09:48
S315	551	((pie or radial or circle) near (menu)) AND ((movement or gesture) WITH (selection))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 09:50
S316	59	((edge or corner) WITH (pie or radial or circle) near menu)	US-PGPUB; USPAT	ADJ	ON	2020/03/10 10:23
S317	59	((edge or corner) WITH ((pie or radial or circle) near menu))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 10:23
S318	8	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$).did.	US-PGPUB	ADJ	ON	2020/03/10 12:33
S319	3	S318 AND ((launch or open) WITH (program or application or interface))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 12:33

S320	10	((pie or radial or circle) near (menu)) WITH ((launch or open) near (program or application))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 12:38
S321	150	((pie or radial or circle) near (menu)) WITH ((application))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 12:40
S322	0	(menu WITH (boundary) WITH (cross through or sweep through))	US-PGPUB; USPAT	ADJ	ON	2020/03/10 18:11
S323	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	US-PGPUB; USPAT	ADJ	ON	2020/03/10 18:12
S324	9	S323 AND (touch WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/03/10 18:12
S325	14	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20130104079-$ or US-20080244447-$ or US-20100333030-$ or US-20100281430-$ or US-20080222569-$).did. or (US-6903723-$).did.	US-PGPUB; USPAT	ADJ	ON	2020/03/10 19:34
S326	7	S325 AND (replac$3)	US-PGPUB; USPAT	ADJ	ON	2020/03/10 19:34
S327	21,869	g06f3/0416.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S328	12,506	g06f3/016.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S329	18,435	g06f3/0412.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S330	6,100	g06f3/0414.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S331	30,655	g06f3/044.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S332	4,212	g06f3/045.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S333	26,778	g06f3/04883.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S334	4,601	g06f2203/04104.cpc.	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03

S335	80,346	S327 or S328 or S329 or S330 or S331 or S332 or S333 or S334	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:03
S336	996	S335 AND (boundary WITH gesture)	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:04
S337	137	S336 AND (display WITH (ceas$3 AND maintain$3))	US-PGPUB; USPAT	ADJ	ON	2020/03/11 18:05
S338	4,099	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/03/11 18:12
S339	3	S338 AND (ceasing near display).clm.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/03/11 18:12
S340	35,403	(GUI) AND ((application or program) WITH (top or locked or anchor or protected))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 09:52
S341	5,458	(GUI) AND ((application or program) WITH (top or locked or anchor or protected) WITH (display))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 09:52
S342	21	(GUI) AND ((application or program) WITH (top or locked or anchor or protected) WITH (maintain$3 near display))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 09:52
S343	316	(GUI) AND (menu WITH (protect$3 or ignor$3 or lock$3) WITH mode)	US-PGPUB; USPAT	ADJ	ON	2020/04/06 10:05
S344	2	"13492764"	US-PGPUB; USPAT	ADJ	ON	2020/04/06 10:15
S345	8	("20020116420" | "20090288032" | "20100146384" | "20100159995" | "20100269040" | "20100306705" | "20110047368" | "20120032984").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2020/04/06 10:16
S346	27	(gesture WITH (edge or boundary) WITH (unlock or un$1lock))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 15:21
S347	217	(gesture WITH (edge or boundary)) AND ((finger or finger$1print) WITH (unlock or un$1lock))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 15:23
S348	74	(gesture WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 15:32
S349	126	(swipe WITH (edge or boundary)) AND ((finger print or finger$1print) WITH (unlock or un$1lock))	US-PGPUB; USPAT	ADJ	ON	2020/04/06 15:33
S350	2,121	(lock$3 or protect$3) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 05:59
S351	0	S350 AND (touch or gesture) AND (radial menu)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 05:59

S352	0	S350 AND ((pie or circle or circular or radial) near menu)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:00
S353	144	S350 AND (menu)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:00
S354	2	(parental control) WITH (prevent$3 WITH (program or application or software) WITH (open$3 or launch$3))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:02
S355	27	(parental control) WITH (touch)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:03
S356	347	(parent or parental) WITH (inactive or disabled or prohibited or locked) AND (swipe or gesture)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:07
S357	347	((parent or parental) WITH (inactive or disabled or prohibited or locked)) AND (swipe or gesture)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:07
S358	6	((parent or parental) WITH (inactive or disabled or prohibited or locked)) WITH (swipe or gesture)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:07
S359	274	(disabl$3 or prevent$3 or lock$3) WITH (application or program or icon) WITH (launch$3 or execut$3) WITH (child or parental)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:14
S360	54	("20110252240" | "20120005723" | "20120109826" | "7721087" | "20060168259" | "20130074142" | "20030233410" | "20100325710" | "20100024016" | "20060149846" | "20100281487" | "6516421" | "20120210443" | "20110210171" | "20100299376" | "8005469" | "20120324067" | "20090300707" | "20060015621" | "20060242685" | "20070254631" | "20100081417" | "20100274910" | "20120131685" | "20110270963" | "20120005745" | "20090181662" | "20070050854" | "20110010699" | "20090254753" | "20120157166" | "20130174222" | "20090031393" | "20100175104" | "20070204166" | "20120214442" | "20020013815" | "20120023573" | "20130219465" | "20040260710" | "7603466" | "8495700" | "20100024020" | "20070204153" | "8208900" | "20080028442" | "20120214503" | "20080184336" | "20090260052" | "20090068996" | "20100024020" | "20100299719" |	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:20

		"6125447" | "7917963" | "8931042").PN.				
S361	4,850	(parent or parental) near (lock or disable or access)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:26
S362	83	S361 AND (touch WITH menu)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:26
S363	1,032	(disabl$3 or lock$3) WITH (icon or application) WITH GUI	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:49
S364	70	(disabl$3 or lock$3) WITH (icon or application) WITH GUI WITH menu	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:50
S365	4	(ignor$3 WITH (flick or swipe) WITH (menu))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:54
S366	276	(ignor$3 WITH (flick or swipe))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:55
S367	21	(ignor$3 WITH (flick or swipe) WITH edge)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:55
S368	17	(ignor$3 WITH (flick or swipe) WITH mode)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:56
S369	0	(touch WITH menu WITH (stay near top))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:58
S370	7	(menu WITH (stay near top))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:58
S371	0	(touch WITH window WITH (stay near top))	US-PGPUB; USPAT	ADJ	ON	2020/04/13 06:59
S372	46	(phone or mobile) WITH (contacts) WITH (edge) WITH (swipe or flick)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 07:00
S373	0	(phone or mobile) WITH (missed call) WITH (edge) WITH (swipe or flick)	US-PGPUB; USPAT	ADJ	ON	2020/04/13 07:01
S374	1	"20060210958".pn.	US-PGPUB; USPAT	ADJ	ON	2020/04/13 07:02
S375	0	"13567004".an. AND (home or home$1gesture)	US-PGPUB; USPAT	ADJ	ON	2020/08/13 00:01
S376	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-$).did.	US-PGPUB	ADJ	ON	2020/08/12 21:15
S377	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.	US-PGPUB	ADJ	ON	2020/08/12 21:15

S378	17	S376 or S377	US-PGPUB; USPAT	ADJ	ON	2020/08/12 21:15
S379	3	S378 AND (home$1screen or home screen)	US-PGPUB; USPAT	ADJ	ON	2020/08/12 21:15
S380	253	(icon or gesture) WITH (return near (home$1screen or home screen))	US-PGPUB; USPAT	ADJ	ON	2020/08/12 21:16
S381	0	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND S378	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:05
S382	3	(calendar WITH contacts WITH home WITH (mail or e$1mail)) AND S380	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:05
S383	124	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (icon or button)	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:06
S384	66	(calendar WITH contacts WITH home WITH (mail or e$1mail)) WITH (menu)	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:11
S385	4,050	(calendar WITH contacts WITH (mail or e$1mail)) AND (home WITH (icon or button))	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:25
S386	1,125	S385 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:28
S387	155	(calendar WITH contacts WITH (mail or e$1mail)) SAME (home WITH (icon or button))	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:28
S388	92	S387 AND ((gesture or touch or swipe or slide) WITH (edge or corner))	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:28
S389	50	"13567004" AND (home)	US-PGPUB; USPAT	ADJ	ON	2020/08/12 23:47
S390	0	"13567004".an. AND (home or home$1gesture)	US-PGPUB; USPAT	ADJ	ON	2020/08/13 06:58
S391	50	"13567004" AND (home or home$1gesture)	US-PGPUB; USPAT	ADJ	ON	2020/08/13 06:59
S392	2	"20120180001".pn. OR "20100159995".pn.	US-PGPUB; USPAT	ADJ	ON	2021/01/06 10:28
S393	18	(US-20110302493-$ or US-20080177662-$ or US-20060161871-$ or US-20060026535-$ or US-20090058829-$ or US-20090085881-$ or US-20100090982-$ or US-20100188327-$ or US-20100251119-$ or US-20100127983-$ or US-20100241989-$ or US-20100088654-$ or US-20050114794-$ or US-20110061021-$ or US-20120054691-$ or US-20120306788-$ or US-20120182296-$).did. or (US-9524042-$).did.	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:06

S394	2	(US-20100088654-$ or US-20100127983-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:06
S395	14	(US-20130162667-$ or US-20120306788-$ or US-20120225413-$ or US-20110196935-$ or US-20110175805-$ or US-20110145764-$ or US-20100313166-$ or US-20100026640-$ or US-20090207175-$ or US-20080219493-$ or US-20080204427-$ or US-20080178126-$ or US-20080024459-$ or US-20040150644-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:06
S396	1	(US-20100153879-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:06
S397	3	(US-20100153879-$ or US-20060026535-$ or US-20110248941-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:07
S398	11	(US-20130093691-$ or US-20120180001-$ or US-20110209088-$ or US-20120304108-$ or US-20090327963-$ or US-20100302172-$ or US-20100306702-$ or US-20100192102-$ or US-20080244447-$ or US-20100333030-$ or US-20080222569-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:07
S399	7	(US-20100269040-$ or US-20100159995-$ or US-20120154301-$ or US-20100240415-$ or US-20090227232-$ or US-20090125850-$ or US-20120180001-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:07
S400	1	(US-20120159380-$).did.	US-PGPUB	ADJ	ON	2021/01/08 13:07
S401	86,000	S393 or S394 or S395 or S396 or "l6" or S397 or S398 or S399 or "l0"	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:07
S402	131	S401 AND (gesture WITH function)	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:07
S403	37,409	S393 or S394 or S395 or S396 or S397 or S398 or S399 or "l0"	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:08
S404	51	S393 or S394 or S395 or S396 or S397 or S398 or S399 or S400	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:08
S405	5	S404 AND (gesture WITH function)	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:08
S406	27	S404 AND ((custom or program$5) WITH function)	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:43
S407	133	(US-20020130836-$ or US-20080018585-$ or US-20040239602-$ or US-20030227433-$ or US-	US-PGPUB; USPAT;	ADJ	ON	2021/01/08 13:46

		20060001637-$ or US-20050030292-$ or US-20030048262-$ or US-20060063298-$ or US-20050083426-$ or US-20040012551-$ or US-20050154798-$ or US-20060227117-$ or US-20050134337-$ or US-20030076343-$ or US-20070069798-$ or US-20040263506-$ or US-20090251452-$ or US-20080002122-$ or US-20100060806-$ or US-20030011581-$ or US-20050206991-$ or US-20050185108-$ or US-20020196238-$ or US-20110007035-$ or US-20080246739-$ or US-20050212746-$).did. or (US-20050262882-$ or US-20070120828-$ or US-20010043167-$ or US-20090058829-$ or US-20080309627-$ or US-20070091292-$ or US-20020057266-$ or US-20020044208-$ or US-20090085881-$ or US-20020196163-$ or US-20040109096-$ or US-20060071887-$ or US-20040160406-$ or US-20040143569-$ or US-20090018419-$ or US-20040150594-$ or US-20070188969-$ or US-20090322689-$ or US-20100090982-$ or US-20090267870-$ or US-20040130524-$ or US-20020167500-$ or US-20080055303-$ or US-20130127800-$ or US-20080231605-$ or US-20120268422-$ or US-20140035818-$).did. or (US-20060033713-$ or US-20080255795-$ or US-20060152484-$ or US-20110164076-$ or US-20100064244-$ or US-20080180406-$ or US-20040150631-$ or US-20110285636-$ or US-20110275317-$ or US-20110037712-$ or US-20100156883-$ or US-20100137079-$ or US-20090195417-$ or US-20090115772-$ or US-20080238879-$ or US-20060262251-$ or US-20130076649-$ or US-20120060123-$ or US-20090040233-$ or US-20080170025-$ or US-20080129904-$ or US-20050123333-$ or US-20060210958-$ or US-20070161382-$ or US-20080178126-$ or US-20040041781-$ or US-20020137550-$).did. or (US-20110298531-$ or US-20080211760-$ or US-20040179005-$ or US-	JPO; DERWENT			

		20020041708-$ or US-20070052934-$ or US-20100188327-$ or US-20110276923-$ or US-20060107146-$ or US-20130167062-$ or US-20090189881-$ or US-20160041581-$ or US-20140042406-$).did. or (US-5982302-$ or US-5182549-$ or US-6294875-$ or US-5666288-$ or US-6229506-$ or US-6469684-$ or US-4288836-$ or US-5528235-$ or US-5745719-$ or US-5612690-$ or US-6597347-$ or US-5760767-$ or US-5770997-$ or US-5187776-$ or US-5767832-$ or US-5473343-$ or US-4139837-$ or US-6297788-$ or US-6356223-$ or US-5581243-$ or US-6204839-$ or US-6043638-$ or US-6310611-$ or US-6286104-$ or US-6748249-$ or US-5701597-$).did. or (US-5534892-$ or US-7194702-$ or US-6252563-$ or US-6011545-$ or US-6192080-$ or US-7551341-$ or US-6705868-$ or US-7697656-$ or US-6903662-$ or US-8593448-$ or US-8089376-$ or US-6396483-$ or US-7293231-$).did. or (JP-11352938-$).did. or (WO-0026890-$).did.				
S408	4	S407 AND (gesture WITH function)	US-PGPUB; USPAT	ADJ	ON	2021/01/08 13:47
S410	2	"20120180001".pn. or "20100159995".pn.	US-PGPUB; USPAT	ADJ	ON	2021/01/08 18:19
S433	0	"17206107"	US-PGPUB; USPAT	ADJ	ON	2021/09/20 12:19
S434	4,453	(("SMITH") near3 ("Michael")).INV.	US-PGPUB; USPAT; USOCR	ADJ	ON	2021/09/20 12:20
S435	2	S434 AND (boundary WITH edge).clm.	US-PGPUB; USPAT; USOCR	ADJ	ON	2021/09/20 12:20
S436	4	"15879111"	US-PGPUB; USPAT	ADJ	ON	2021/09/20 18:16
S437	1	"16708418"	US-PGPUB; USPAT	ADJ	ON	2021/09/20 18:22

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp

S93	3,480	G06F3/04847.cpc.	USPAT	ADJ	ON	2018/09/07 17:58
S94	4,153	G06F3/04817.cpc.	USPAT	ADJ	ON	2018/09/07 17:58
S95	9,279	g06f3/0482.cpc.	USPAT	ADJ	ON	2018/09/07 17:58
S96	7,394	g06f3/04883.cpc.	USPAT	ADJ	ON	2018/09/07 17:58
S99	0	(when near slide gesture).dm.	USPAT	ADJ	ON	2019/01/03 07:53
S100	21	(slide gesture WITH second).clm.	USPAT	ADJ	ON	2019/01/03 07:53
S103	1	((slide WITH gesture) WITH (pressure) WITH menu).clm.	USPAT	ADJ	ON	2019/01/04 18:45
S104	3,821	G06F3/04847.cpc.	USPAT	ADJ	ON	2019/01/04 18:50
S105	4,491	G06F3/04817.cpc.	USPAT	ADJ	ON	2019/01/04 18:50
S106	10,010	g06f3/0482.cpc.	USPAT	ADJ	ON	2019/01/04 18:50
S107	7,926	g06f3/04883.cpc.	USPAT	ADJ	ON	2019/01/04 18:50
S108	19,968	S104 or S105 or S106 or S107	USPAT	ADJ	ON	2019/01/04 18:50
S109	3,565	S108 AND (slide or gesture).clm.	USPAT	ADJ	ON	2019/01/04 18:51
S110	203	S109 AND (pressure).clm.	USPAT	ADJ	ON	2019/01/04 18:51
S145	4,932	G06F3/04847.cpc.	USPAT	ADJ	ON	2019/12/03 19:32
S146	5,592	G06F3/04817.cpc.	USPAT	ADJ	ON	2019/12/03 19:32
S147	12,545	g06f3/0482.cpc.	USPAT	ADJ	ON	2019/12/03 19:32
S148	9,558	g06f3/04883.cpc.	USPAT	ADJ	ON	2019/12/03 19:32
S149	24,442	S145 or S146 or S147 or S148	USPAT	ADJ	ON	2019/12/03 19:32
S150	39	S149 AND (inversely).clm.	USPAT	ADJ	ON	2019/12/03 19:32
S151	0	"6323846".pn. AND (invers$2)	USPAT	ADJ	ON	2019/12/03 19:34
S288	5,129	G06F3/04847.cpc.	USPAT	ADJ	ON	2020/02/01 10:45

S289	5,802	G06F3/04817.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S290	12,997	g06f3/0482.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S291	9,855	g06f3/04883.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S292	0	(when near slide gesture).dm.	USPAT	ADJ	ON	2020/02/01 10:45
S293	27	(slide gesture WITH second).clm.	USPAT	ADJ	ON	2020/02/01 10:45
S294	4	((slide WITH gesture) WITH (pressure) WITH menu).clm.	USPAT	ADJ	ON	2020/02/01 10:45
S295	5,129	G06F3/04847.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S296	5,802	G06F3/04817.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S297	12,997	g06f3/0482.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S298	9,855	g06f3/04883.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S299	25,236	S295 or S296 or S297 or S298	USPAT	ADJ	ON	2020/02/01 10:45
S300	4,516	S299 AND (slide or gesture).clm.	USPAT	ADJ	ON	2020/02/01 10:45
S301	269	S300 AND (pressure).clm.	USPAT	ADJ	ON	2020/02/01 10:45
S302	5,129	G06F3/04847.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S303	5,802	G06F3/04817.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S304	12,997	g06f3/0482.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S305	9,855	g06f3/04883.cpc.	USPAT	ADJ	ON	2020/02/01 10:45
S306	25,236	S302 or S303 or S304 or S305	USPAT	ADJ	ON	2020/02/01 10:45
S307	39	S306 AND (inversely).clm.	USPAT	ADJ	ON	2020/02/01 10:45
S308	0	"6323846".pn. AND (invers$2)	USPAT	ADJ	ON	2020/02/01 10:45
S409	1	"Term Removed"	USPAT	ADJ	ON	2021/01/08 13:07
S411	4,302	g06f3/0416.cpc.	USPAT	ADJ	ON	2021/03/13 14:14

S412	6,160	g06f3/016.cpc.	USPAT	ADJ	ON	2021/03/13 14:14
S413	9,420	g06f3/0412.cpc.	USPAT	ADJ	ON	2021/03/13 14:14
S414	874	g06f3/0414.cpc.	USPAT	ADJ	ON	2021/03/13 14:15
S415	4,823	g06f3/044.cpc.	USPAT	ADJ	ON	2021/03/13 14:15
S416	2,164	g06f3/045.cpc.	USPAT	ADJ	ON	2021/03/13 14:15
S417	11,818	g06f3/04883.cpc.	USPAT	ADJ	ON	2021/03/13 14:15
S418	2,176	g06f2203/04104.cpc.	USPAT	ADJ	ON	2021/03/13 14:15
S419	31,615	S411 or S412 or S413 or S414 or S415 or S416 or S417 or S418	USPAT	ADJ	ON	2021/03/13 14:33
S420	88	S419 AND ((protect or protected or lock or locked) NEAR (mode or feature or setting)).clm.	USPAT	ADJ	ON	2021/03/13 14:34
S421	1	"10,656,753".pn.	USPAT	ADJ	ON	2021/03/13 18:18
S422	4,302	g06f3/0416.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S423	6,160	g06f3/016.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S424	9,420	g06f3/0412.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S425	874	g06f3/0414.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S426	4,823	g06f3/044.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S427	2,164	g06f3/045.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S428	11,818	g06f3/04883.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S429	2,176	g06f2203/04104.cpc.	USPAT	ADJ	ON	2021/03/13 18:32
S430	31,615	S422 or S423 or S424 or S425 or S426 or S427 or S428 or S429	USPAT	ADJ	ON	2021/03/13 18:32
S431	16	S430 AND ((determin$3 WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	USPAT	ADJ	ON	2021/03/13 18:32

S432	35	S430 AND (((determin$3 or detect$3) WITH (protect or protected or lock or locked) NEAR (mode or feature or setting))).clm.	USPAT	ADJ	ON	2021/03/13 18:33

9/23/2021 1:52:01 PM
C:\Users\axavier\Desktop\axavier data files\EAST workspaces\17206107-CON of 16708418-CON of 16377142-CON of 16153763-CON of 15072354-CON of 13567004.wsp

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	10956022	B2	2021-03-23	Karunamuni et al.	Entire Document

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

	1		

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	Antonio J XAVIER
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-09-24
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Acknowledgement Receipt

EFS ID:	43864000
Application Number:	17206107
International Application Number:	
Confirmation Number:	7030
Title of Invention:	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK
First Named Inventor/Applicant Name:	Michael S Smith
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	SMITH070AT_1
Receipt Date:	24-SEP-2021
Filing Date:	18-MAR-2021
Time Stamp:	17:25:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	SMITH070AT_1_IDS_Coversheet_vF_24-Sep-2021.pdf	52675 d685987d3e19064eb8ead2e22ce2ca79dda7ddd6	no	2

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2	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210924_vF.pdf	1052771 211a3bf5193fee0e45715002c2320f6973373985	no	4
Warnings:					
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			Total Files Size (in bytes):	1105446	

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7030
MICHAEL S. SMITH	Examiner: Antonio J. XAVIER
Application No.: 17/206,107	Art Unit: 2623
File Date: 03/18/2021	Docket No.: SMITH070AT_1
Title: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	Date: 9/24/2021

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56 AND 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

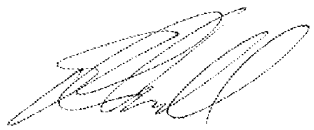
The reference(s) listed in the attached PTO Form SB08, cop(ies) of which is attached (when necessary), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97. The Examiner is requested to make the reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

Applicant hereby provides notice that at least a portion of at least some of the claims of the present application were copied from at least a portion of at least some of the claims of the application corresponding to U.S. Pub. No.: 2019/0212892 A1; US10956022B2 and/or any patent to issue therefrom.

This Information Disclosure Statement is believed to be filed within three months of the filing date of a national application other than a continued prosecution application, within three months of the date of entry of the national stage in an international application, before the mailing of a first Office action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement.

Respectfully submitted,



Dated: 24 Sep 2021

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PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	
Attorney Docket Number	SMITH070AT_1

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8832577	B2	2014-09-09	Sirpal et al.	
	2	8836648	B2	2014-09-16	Wilairat	Entire Document
	3	8838076	B2	2014-09-16	Lee	
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	5	8854317	B2	2014-10-07	Homma et al.	
	6	8866785	B2	2014-10-21	Ludwig	
	7	8872728	B2	2014-10-28	Fujiwaka	
	8	8872798	B2	2014-10-28	Rabu et al.	

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	33	9035897	B2	2015-05-19	Kinoshita	
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	86	9972297	B2	2018-05-15	Xu et al.	
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	1	STOJANOVIC, V. et al., "Adaptive Equalization and Data Recovery in a Dual-Mode (PAM2/4) Serial Link Transceiver," 2004, pp. 1-4	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

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	49	File Wrapper for US Publ. No. 20190212892	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Application Number	17206107
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	First Named Inventor	Michael S Smith
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	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Acknowledgement Receipt	
EFS ID:	42649246
Application Number:	17206107
International Application Number:	
Confirmation Number:	7030
Title of Invention:	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK
First Named Inventor/Applicant Name:	Michael S Smith
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
Filer Authorized By:	
Attorney Docket Number:	SMITH070AT_1
Receipt Date:	05-MAY-2021
Filing Date:	18-MAR-2021
Time Stamp:	21:12:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	SMITH070AT_1_IDS_Coversheet_vF_05-May-2021.pdf	40741 7a04b2af3e126cf92e72d069946ee5bd24b519c6	no	2

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210505_1_OF_6_vF.pdf	1065454 292810bdf9658ac8f2d1f8c1ebfebbd5506dfd17	no	40
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Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210505_2_OF_6_vF.pdf	1067812 c8d39ae70baa0cc73d9b0eec4a20fc740e65f0a2	no	40
Warnings:					
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4	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210505_3_OF_6_vF.pdf	1065171 6fdd668ce7b9a9793f3412cbf0579d013e394d3b	no	40
Warnings:					
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5	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210505_4_OF_6_vF.pdf	1064413 e4b8e81f54fceff780079c4ca727f17ec58af9cb	no	37
Warnings:					
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6	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210505_5_OF_6_vF.pdf	1061832 210a36b040d5f9172d321ff83a3058e2ef0ba25d	no	36
Warnings:					
Information:					
7	Information Disclosure Statement (IDS) Form (SB08)	SMITH070AT_1_IDS_20210505_6_OF_6_vF.pdf	1057658 f859e97df6029ad4a5ad61905cb4f8b230d615a5	no	16
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Information:					
8	Non Patent Literature	US20190212892_filewrapper_1.pdf	24112000 44f919377eebb927fae72db123a61cc916be0139	no	219
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9	Non Patent Literature	US20190212892_filewrapper_2.pdf	24027977 a44e4840c4cbc9abecb73f2b15f6c04d5429133a	no	182
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11	Non Patent Literature	US20190212892_filewrapper_4.pdf	24009642 57997fe143b60ed8e4b120cd73f578ceb1dbe238	no	226
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Information:					
12	Non Patent Literature	US20190212892_filewrapper_5.pdf	23348039 5d7823dabe1d22447aeaa12b003d3459dfc1024b	no	192
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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 7030
MICHAEL S. SMITH	Examiner: not yet assigned
Application No.: 17.206,107	Art Unit: 2623
File Date: 03/18/2021	Docket No.: SMITH070AT_1
Title: DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	Date: 5/5/2021

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56 AND 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Examiner:

The reference(s) listed in the attached PTO Form 1449, cop(ies) of which is attached (when necessary), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97. The Examiner is requested to make the reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

Applicant hereby provides notice that at least a portion of at least some of the claims of the present application were copied from at least a portion of at least some of the claims of the application corresponding to U.S. Pub. No.: 2019/0212892 A1 and/or any patent to issue therefrom.

This Information Disclosure Statement is believed to be filed within three months of the filing date of a national application other than a continued prosecution application, within three months of the date of entry of the national stage in an international application, before the mailing of a first Office action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement.

Respectfully submitted,

Dated: 05 May 2021

Patrick E. Caldwell, Esq.
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17206107
Filing Date	2021-03-18
First Named Inventor	Michael S Smith
Art Unit	2623
Examiner Name	
Attorney Docket Number	SMITH070AT_1

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7627307	B2	2009-12-01	Droste et al.	
	2	7627352	B2	2009-12-01	Daniel M. Gauger et al.	
	3	7630202	B2	2009-12-08	Pauley et al.	
	4	7633963	B1	2009-12-15	Anderson et al.	
	5	7636274	B2	2009-12-22	Solomon et al.	
	6	7639239	B2	2009-12-29	Kajimoto et al.	
	7	7643642	B2	2010-01-05	Patino et al.	
	8	7649577	B2	2010-01-19	Sanelle et al.	

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	Attorney Docket Number	SMITH070AT_1

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	10	7650168	B2	2010-01-19	Bailey	
	11	7659885	B2	2010-02-09	Kraus et al.	
	12	7663607	B2	2010-02-16	Hotelling et al.	
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	14	7680490	B2	2010-03-16	Bloebaum et al.	
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	16	7683889	B2	2010-03-23	Ribikauskas et al.	
	17	7689168	B2	2010-03-30	House	
	18	7692627	B2	2010-04-06	Wilson	
	19	7692637	B2	2010-04-06	Davis	

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	21	7705824	B2	2010-04-27	Baucom et al.	
	22	7715831	B2	2010-05-11	Wakefield	
	23	7715873	B1	2010-05-11	Biere et al.	
	24	7716411	B2	2010-05-11	Panabaker et al.	
	25	7720552	B1	2010-05-18	Lloyd	
	26	7721227	B2	2010-05-18	Ronkainen	
	27	7721227	B2	2010-05-18	Ronkainen	
	28	7724589	B2	2010-05-25	Rajan et al.	
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	62	7930002	B2	2011-04-19	Gong	
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	75	7982721	B2	2011-07-19	Hio	
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	97	8090897	B2	2012-01-03	Rajan et al.	
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	111	8120044	B2	2012-02-21	Cho et al.	
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	120	8144453	B2	2012-03-27	Brown et al.	
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	144	8223799	B2	2012-07-17	Karaoguz	
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	149	8253699	B2	2012-08-28	Son	
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	152	8265709	B2	2012-09-11	Forstall	
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	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

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	Art Unit	2623
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	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

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	31	BUNGALE, PARASHANTH, "ARM Virtualization: CPU & MMU Issues," VMware, 2010, slides 1-16	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

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If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17206107
	Filing Date	2021-03-18
	First Named Inventor	Michael S Smith
	Art Unit	2623
	Examiner Name	
	Attorney Docket Number	SMITH070AT_1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Patrick Caldwell/	Date (YYYY-MM-DD)	2021-05-05
Name/Print	Patrick Caldwell	Registration Number	44580

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/206,107	03/18/2021	2642	1040	SMITH070AT_1	8	3

CONFIRMATION NO. 7030

92045
The Caldwell Firm, LLC
PO Box 59655
Dept. SVIPGP
Dallas, TX 75229

FILING RECEIPT

Date Mailed: 03/30/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Michael S Smith, Los Altos, CA;

Applicant(s)

P4TENTS1 LLC, Wilmington, DE;

Power of Attorney: The patent practitioners associated with Customer Number 92045

Domestic Priority data as claimed by applicant

This application is a CON of 16/708,418 12/09/2019
which is a CON of 16/377,142 04/05/2019 PAT 10656753
which is a CON of 16/153,763 10/06/2018 PAT 10275086
which is a CON of 15/072,354 03/16/2016 PAT 10133397
which is a CON of 13/567,004 08/03/2012 PAT 9417754
which claims benefit of 61/581,918 12/30/2011
and claims benefit of 61/569,213 12/09/2011
and claims benefit of 61/566,577 12/02/2011
and claims benefit of 61/515,835 08/05/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/29/2021

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/206,107**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No
**** SMALL ENTITY ****
Title

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/206,107

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	80		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	350		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	8 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 240 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			210			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	1040		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

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I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

P4TENTS1, LLC

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Michael S Smith/	Date (Optional)	
Name	Michael S. Smith		
Title	Member & Manager - P4TENTS1, LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 1 forms are submitted.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	GESTURE-EQUIPPED TOUCH SCREEN SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [■] The attached application, or
- [ ] United States application or PCT international application number _____

  filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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LEGAL NAME OF INVENTOR

Inventor: Michael Smith Date (Optional) :_____

Signature: /Michael Smith/

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SMITH070AT_1
	Application Number	
Title of Invention	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Michael	S	Smith	

Residence Information (Select One) ● US Residency ○ Non US Residency ○ Active US Military Service

City	Los Altos	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	P4TENTS1, LLC		
Address 2	PO BOX 999		
City	Los Altos	**State/Province**	CA
Postal Code	94023-0999	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	92045		
Email Address	pcaldwell@thecaldwellfirm.com	Add Email	Remove Email

Application Information:

Title of the Invention	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK		
Attorney Docket Number	SMITH070AT_1	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)		**Suggested Figure for Publication (if any)**	

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Title of Invention	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	92045		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16708418	2019-12-09

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	Application Number	
Title of Invention	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK	

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16708418	Continuation of	16377142	2019-04-05
Prior Application Status	Patented	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16377142	Continuation of	16153763	2018-10-06	10275086	2019-04-30
Prior Application Status	Patented	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16153763	Continuation of	15072354	2016-03-16	10133397	2018-11-20
Prior Application Status	Patented	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15072354	Continuation of	13567004	2012-08-03	9417754	2016-08-16
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13567004	Claims benefit of provisional	61581918	2011-12-30
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13567004	Claims benefit of provisional	61569213	2011-12-09
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13567004	Claims benefit of provisional	61566577	2011-12-02
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13567004	Claims benefit of provisional	61515835	2011-08-05
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.			Add

Foreign Priority Information:

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	Application Number	
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This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 — Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	P4TENTS1 LLC		
Mailing Address Information For Applicant:			
Address 1	1201 Orange St		
Address 2	#600		
City	Wilmington	**State/Province**	DE
Country	US	Postal Code	19899
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Remove

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Patrick Caldwell/			Date (YYYY-MM-DD)	2021-03-18
First Name	Patrick	Last Name	Caldwell	Registration Number	44580

Additional Signature may be generated within this form by selecting the Add button. Add

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Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

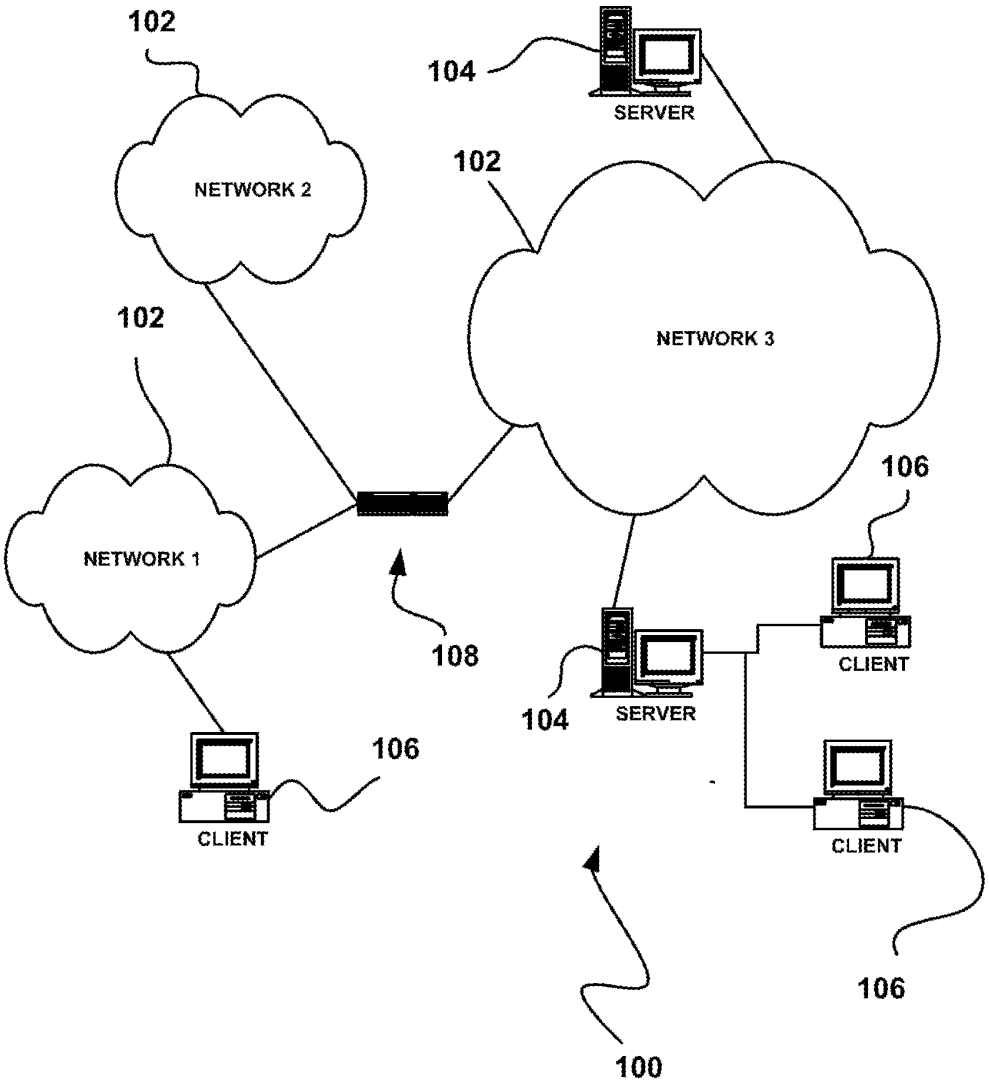
102
104
SERVER
NETWORK 2
102
NETWORK 3
102
106
NETWORK 1
108
104
SERVER
CLIENT
106
CLIENT
CLIENT
106
100

FIGURE 1

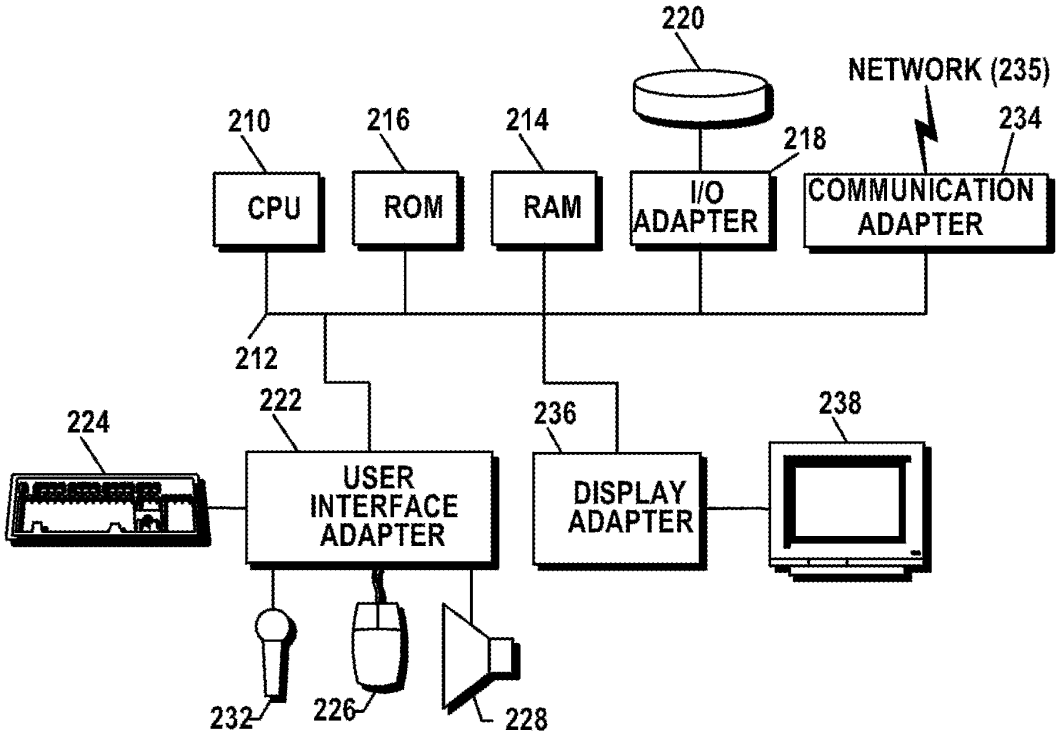
220
NETWORK (235)
210
216
214
218
234
CPU
ROM
RAM
I/O ADAPTER
COMMUNICATION ADAPTER
212
222
236
238
224
USER INTERFACE ADAPTER
DISPLAY ADAPTER
232
226
228

FIGURE 2

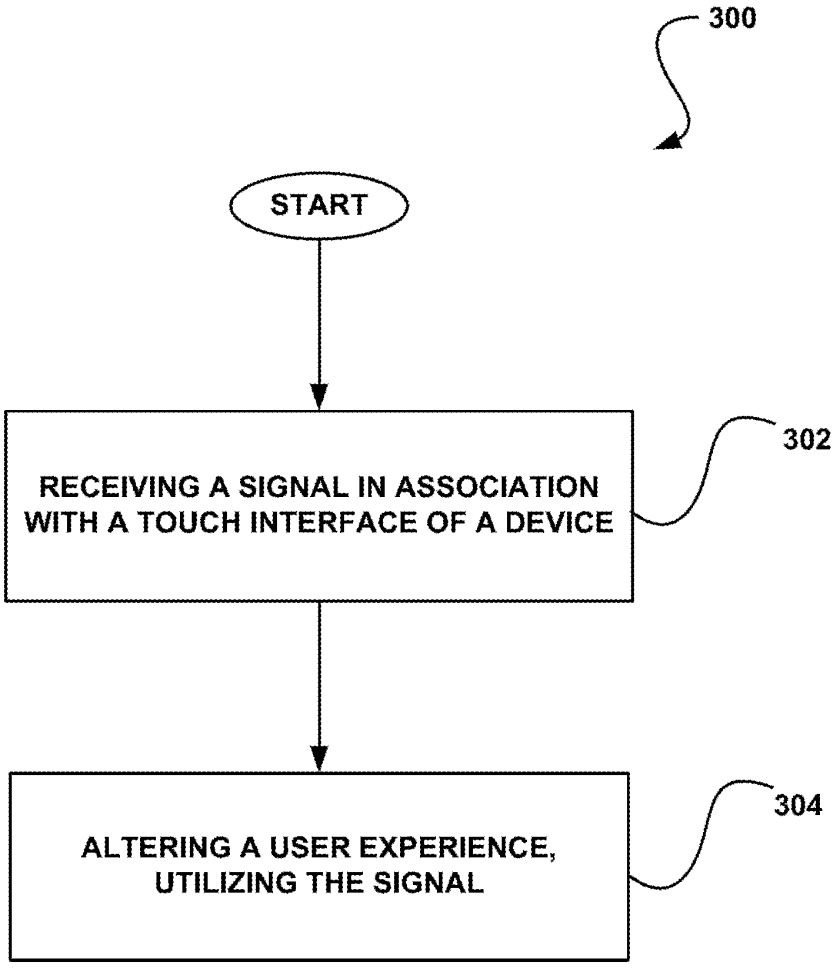
300
START
RECEIVING A SIGNAL IN ASSOCIATION WITH A TOUCH INTERFACE OF A DEVICE
302
ALTERING A USER EXPERIENCE, UTILIZING THE SIGNAL
304

FIGURE 3

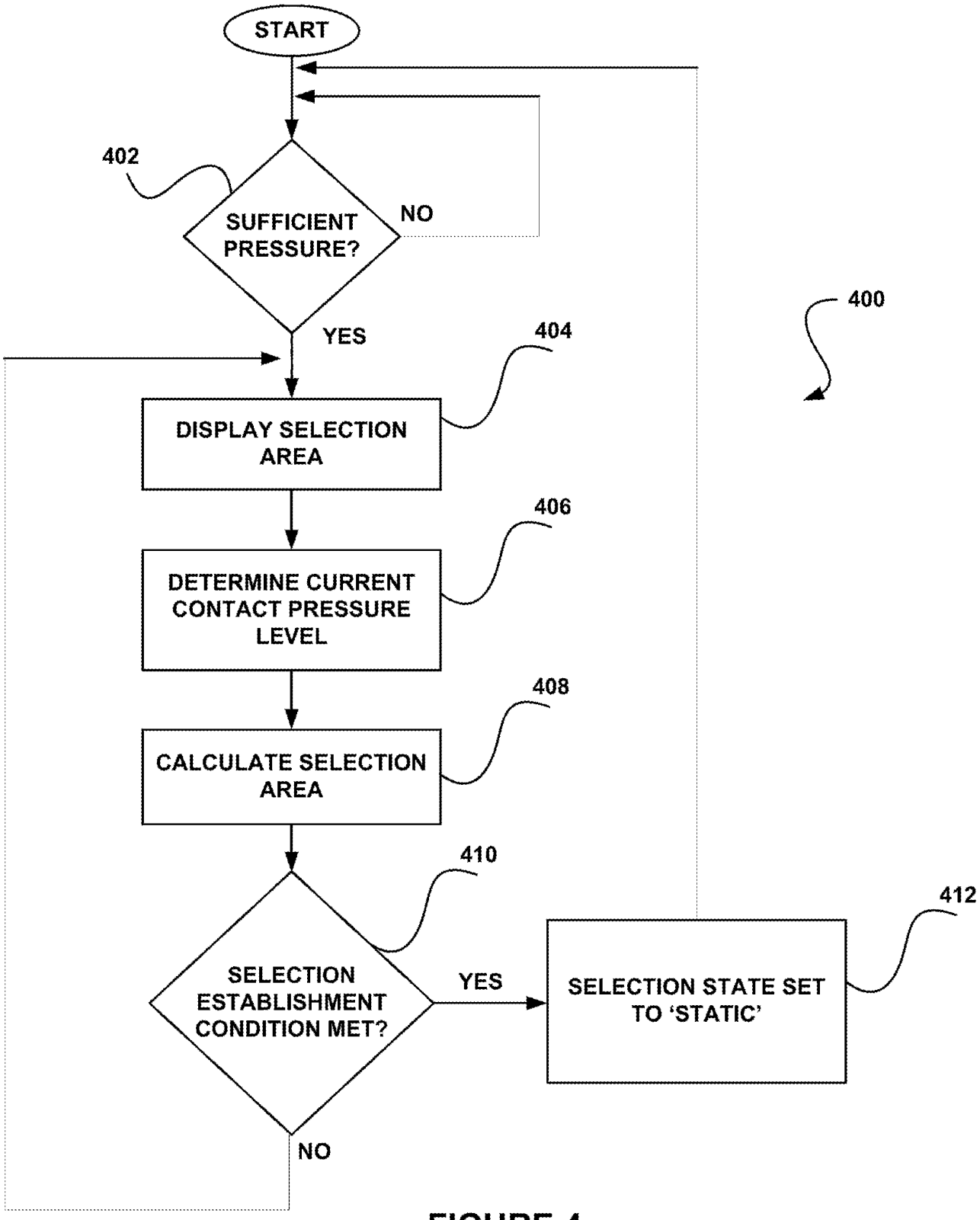
START
402
SUFFICIENT PRESSURE?
NO
YES
400
404
DISPLAY SELECTION AREA
406
DETERMINE CURRENT CONTACT PRESSURE LEVEL
408
CALCULATE SELECTION AREA
410
SELECTION ESTABLISHMENT CONDITION MET?
YES
412
SELECTION STATE SET TO 'STATIC'
NO

FIGURE 4

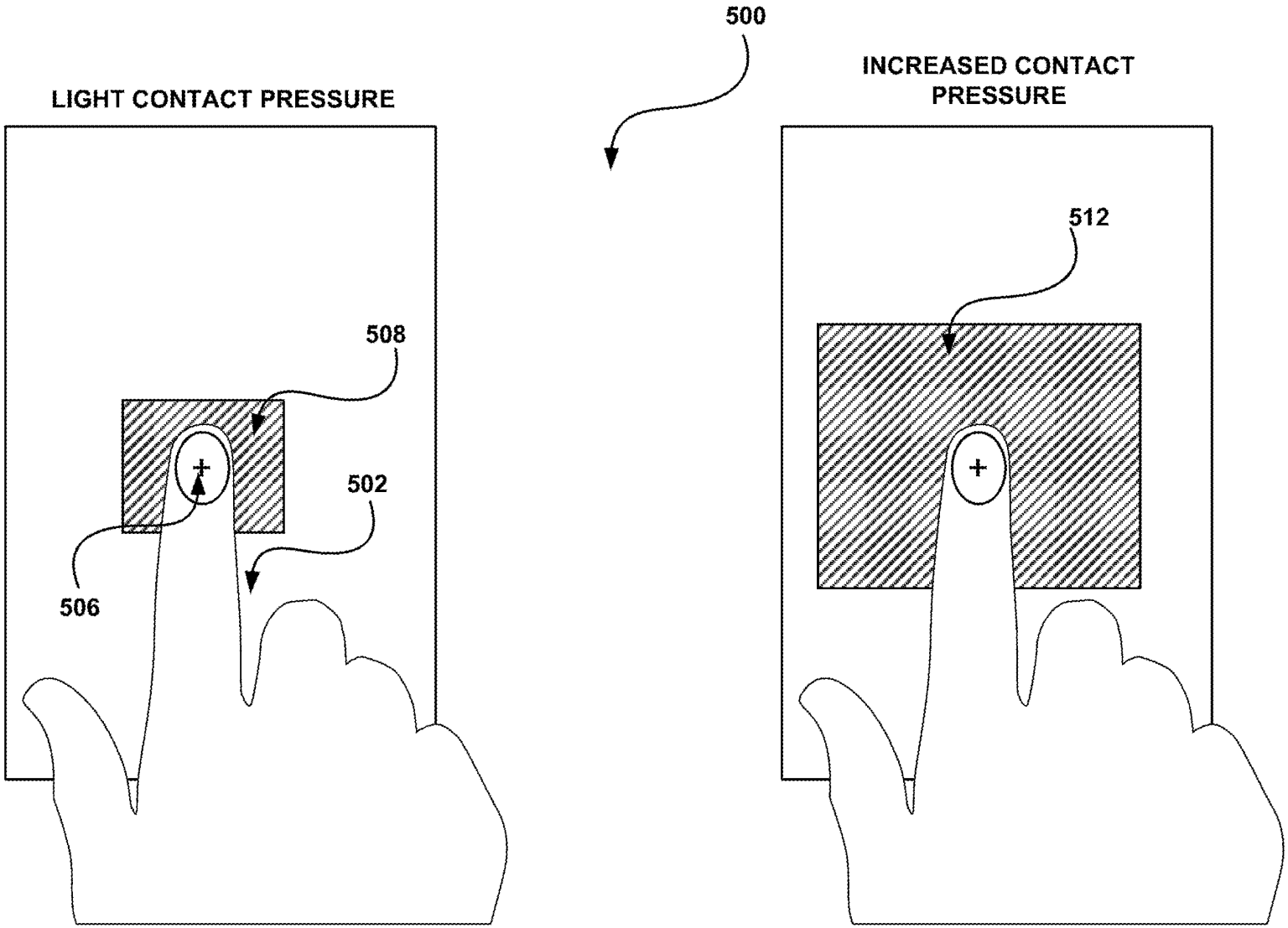
500
LIGHT CONTACT PRESSURE
INCREASED CONTACT PRESSURE
508
502
506
512

FIGURE 5

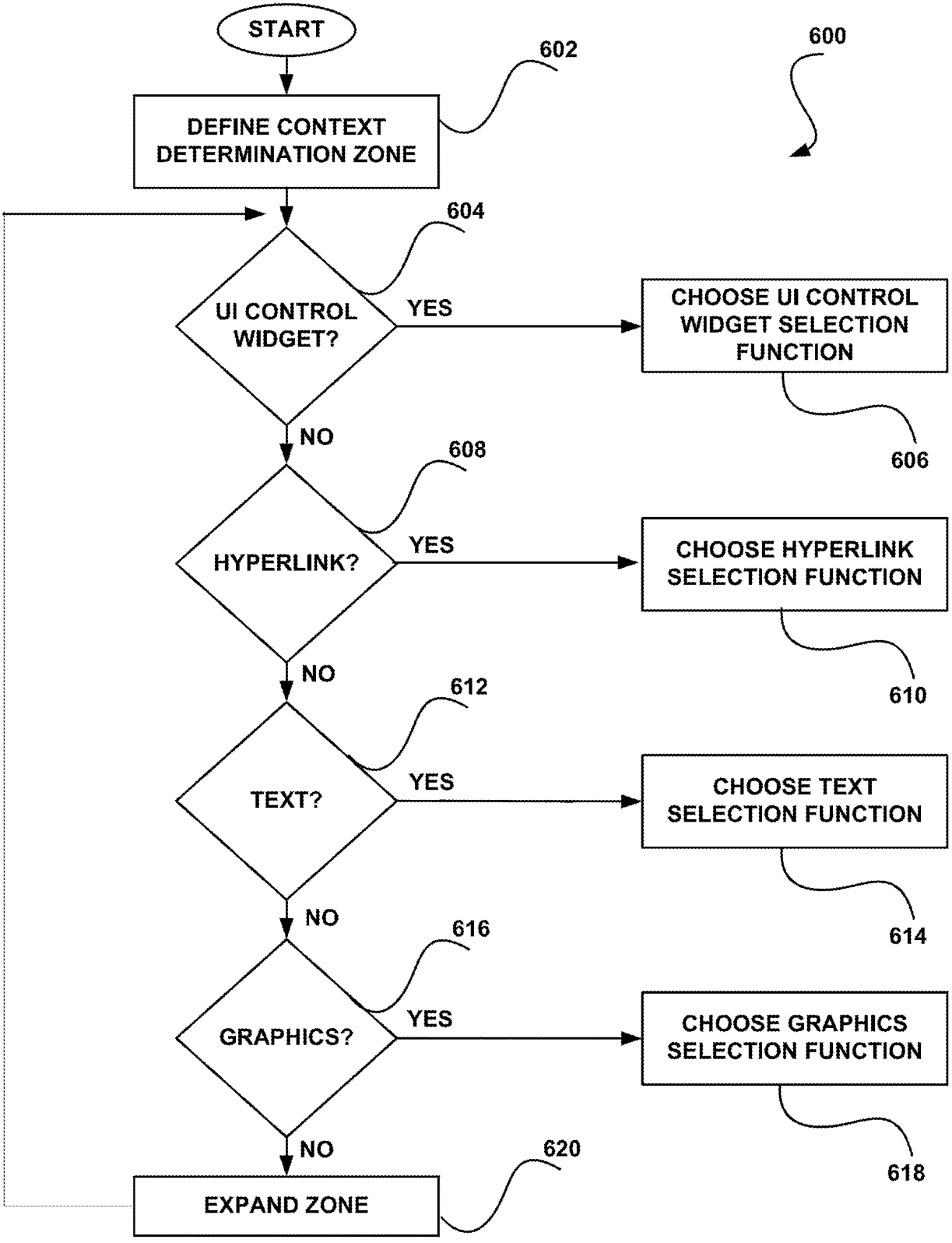
START
600
602
DEFINE CONTEXT DETERMINATION ZONE
604
UI CONTROL WIDGET?
YES
CHOOSE UI CONTROL WIDGET SELECTION FUNCTION
606
NO
608
HYPERLINK?
YES
CHOOSE HYPERLINK SELECTION FUNCTION
610
NO
612
TEXT?
YES
CHOOSE TEXT SELECTION FUNCTION
614
NO
616
GRAPHICS?
YES
CHOOSE GRAPHICS SELECTION FUNCTION
618
NO
620
EXPAND ZONE

FIGURE 6

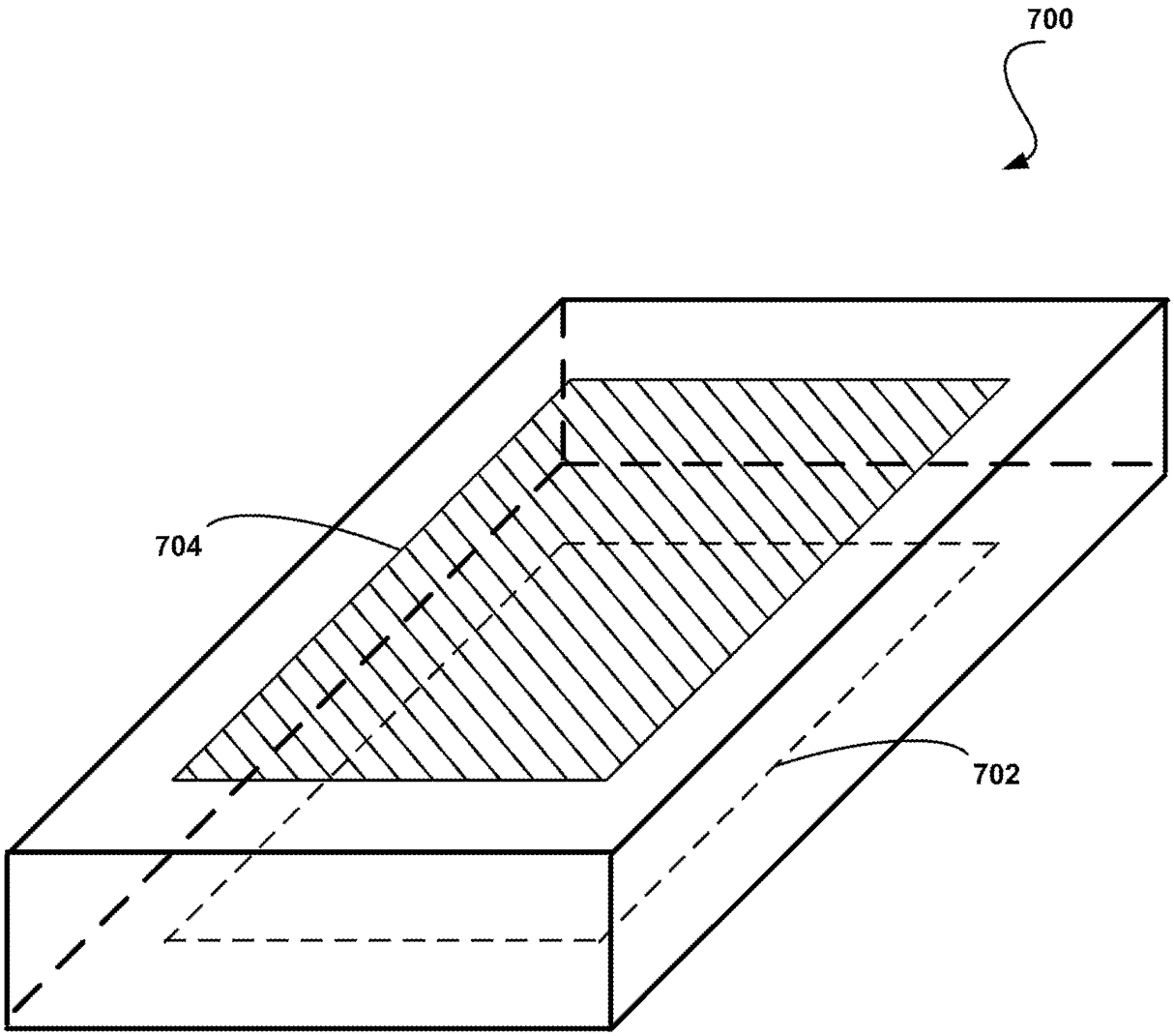

FIGURE 7

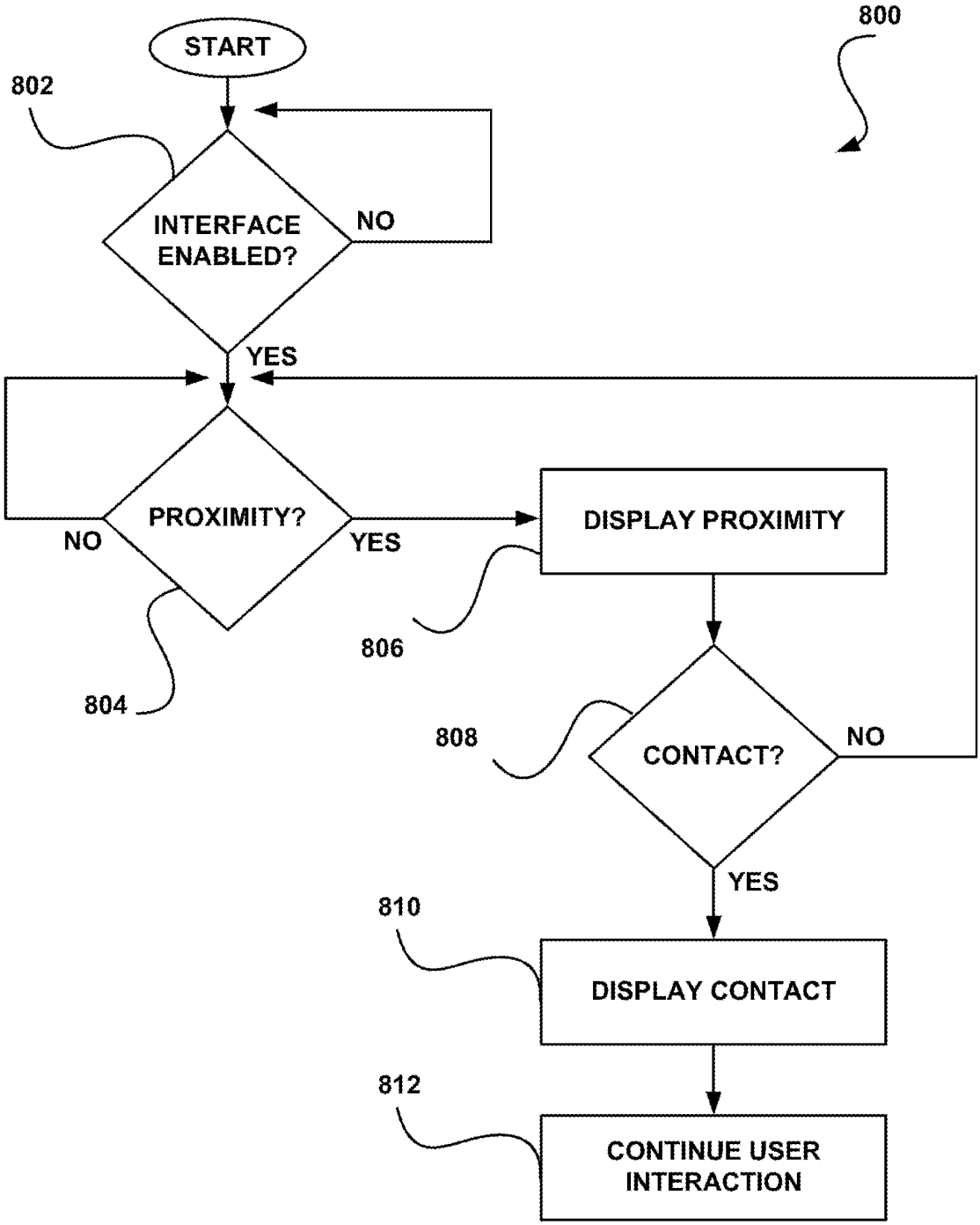
800
START
802
INTERFACE ENABLED?
NO
YES
PROXIMITY?
NO
YES
804
DISPLAY PROXIMITY
806
808
CONTACT?
NO
YES
810
DISPLAY CONTACT
812
CONTINUE USER INTERACTION

FIGURE 8

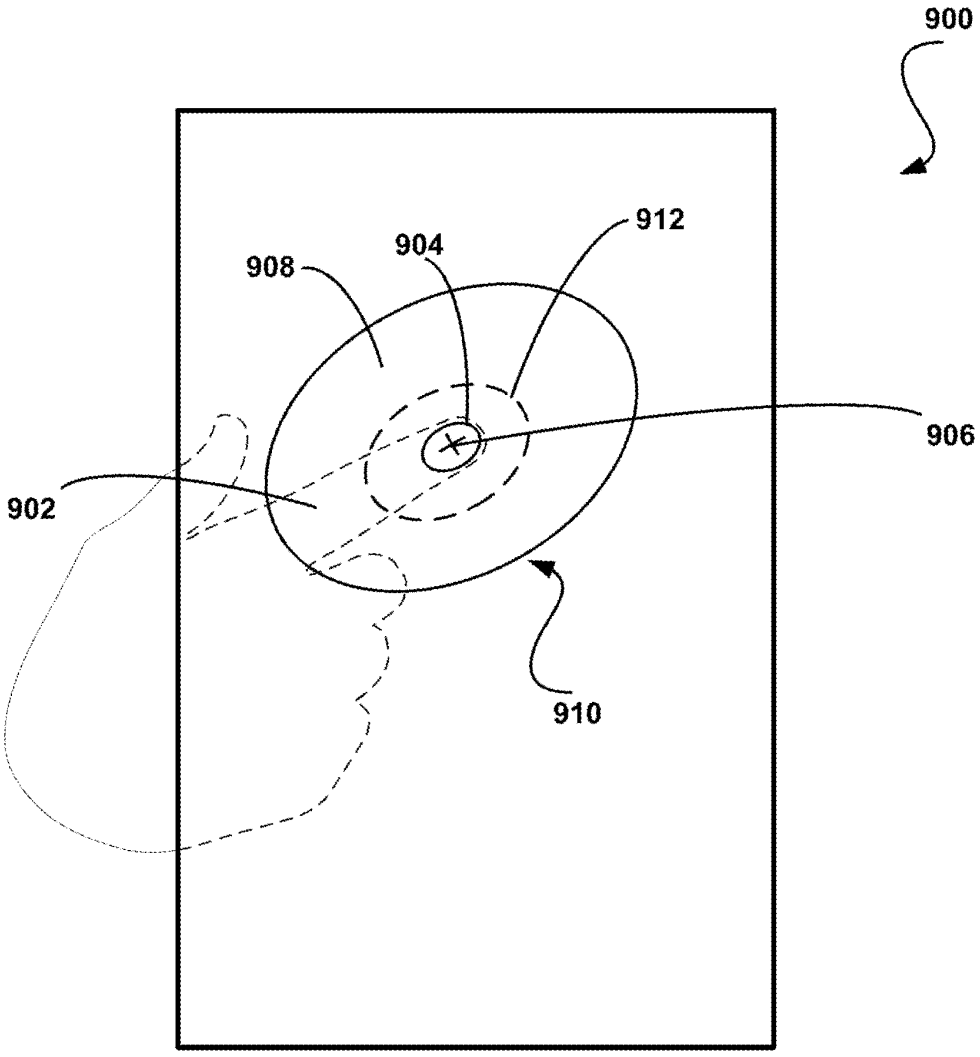

FIGURE 9

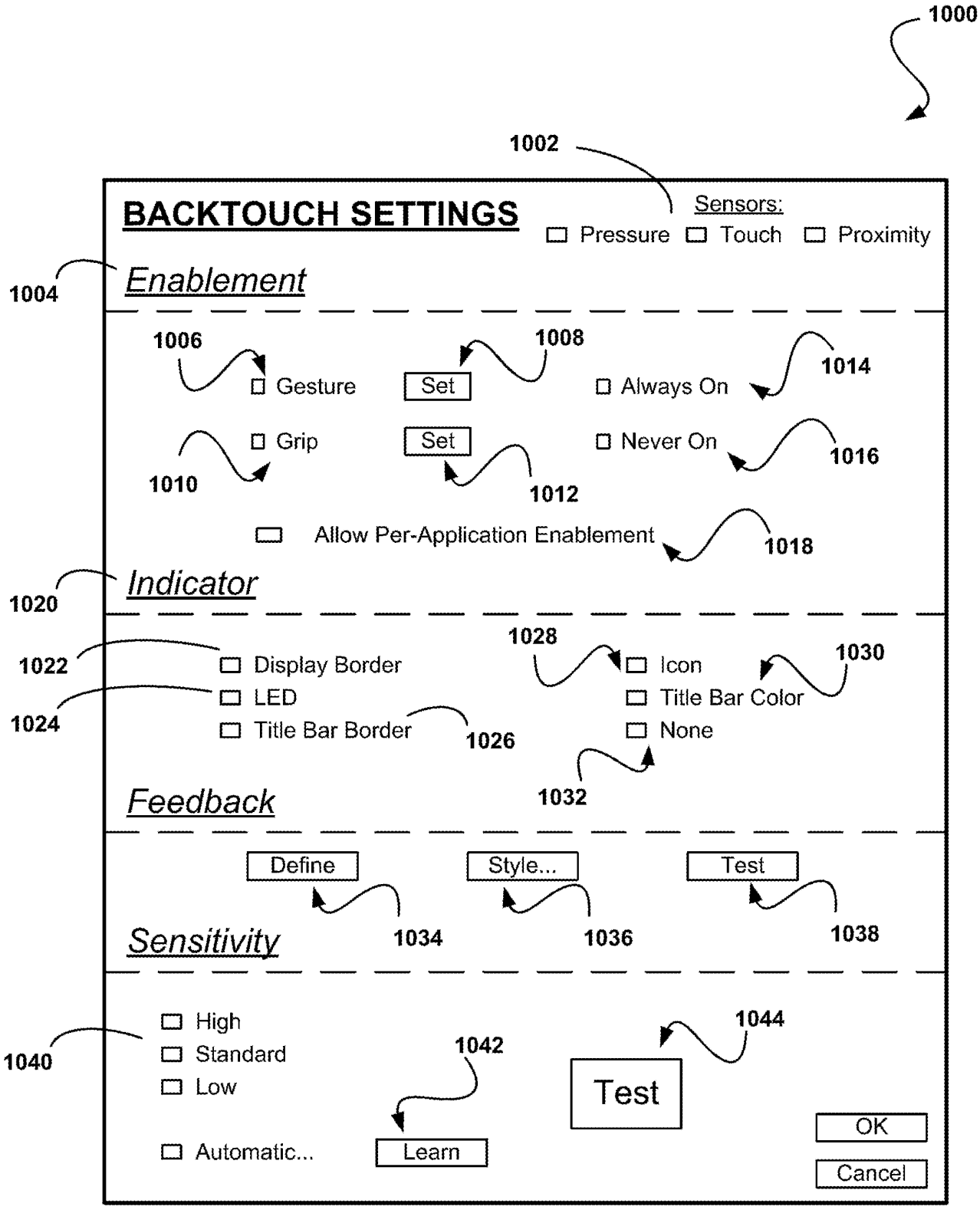
1000
1002
BACKTOUCH SETTINGS
Sensors:
Pressure
Touch
Proximity
1004
Enablement
1006
Gesture
Set
1008
Always On
1014
Grip
Set
Never On
1016
1010
1012
Allow Per-Application Enablement
1018
1020
Indicator
1022
Display Border
1028
Icon
1030
1024
LED
Title Bar Color
Title Bar Border
1026
None
1032
Feedback
Define
Style...
Test
Sensitivity
1034
1036
1038
1040
High
Standard
Low
1042
1044
Test
Automatic...
Learn
OK
Cancel

FIGURE 10

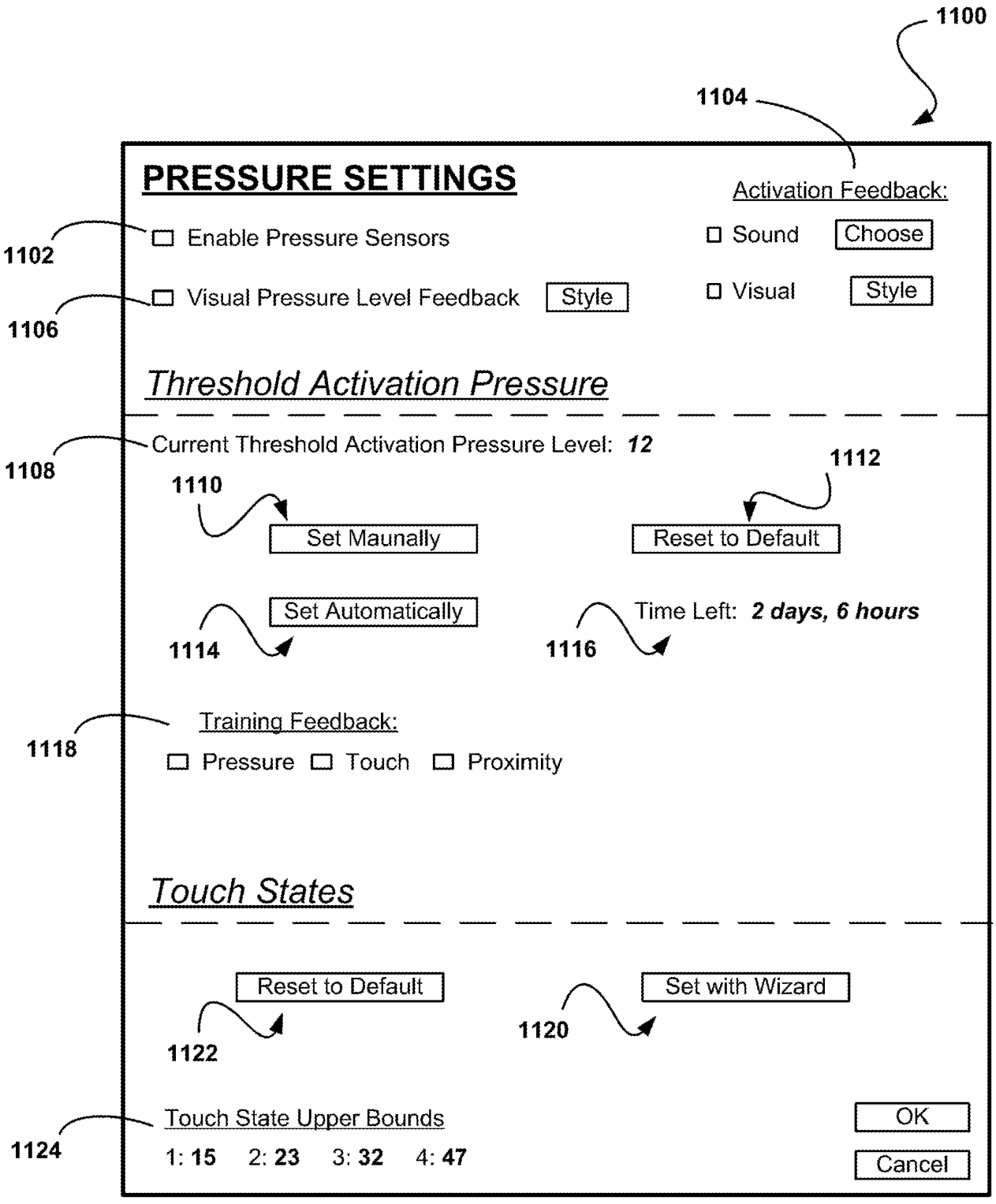
1100
1104
PRESSURE SETTINGS
Activation Feedback:
1102
Enable Pressure Sensors
Sound
Choose
1106
Visual Pressure Level Feedback
Style
Visual
Style
Threshold Activation Pressure
1108
Current Threshold Activation Pressure Level: 12
1110
1112
Set Maunally
Reset to Default
Set Automatically
1114
1116
Time Left: 2 days, 6 hours
1118
Training Feedback:
Pressure
Touch
Proximity
Touch States
Reset to Default
Set with Wizard
1122
1120
1124
Touch State Upper Bounds
1: 15 2: 23 3: 32 4: 47
OK
Cancel

FIGURE 11

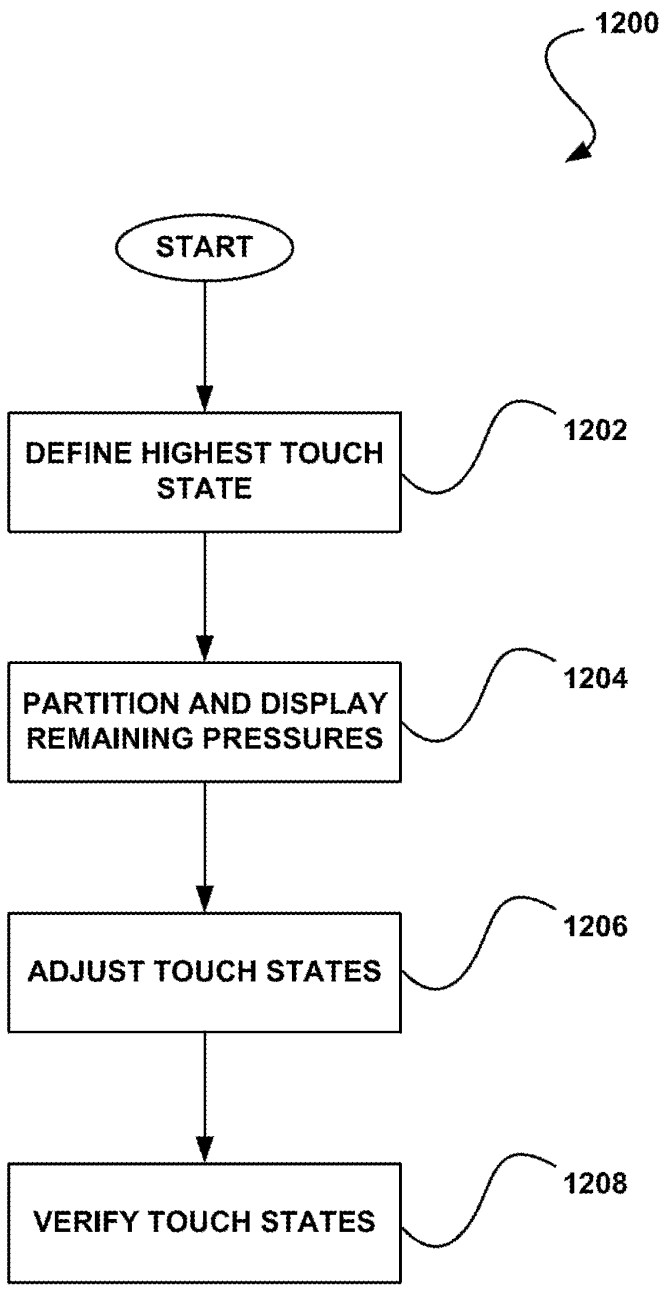
1200
START
DEFINE HIGHEST TOUCH STATE
1202
PARTITION AND DISPLAY REMAINING PRESSURES
1204
ADJUST TOUCH STATES
1206
VERIFY TOUCH STATES
1208

FIGURE 12

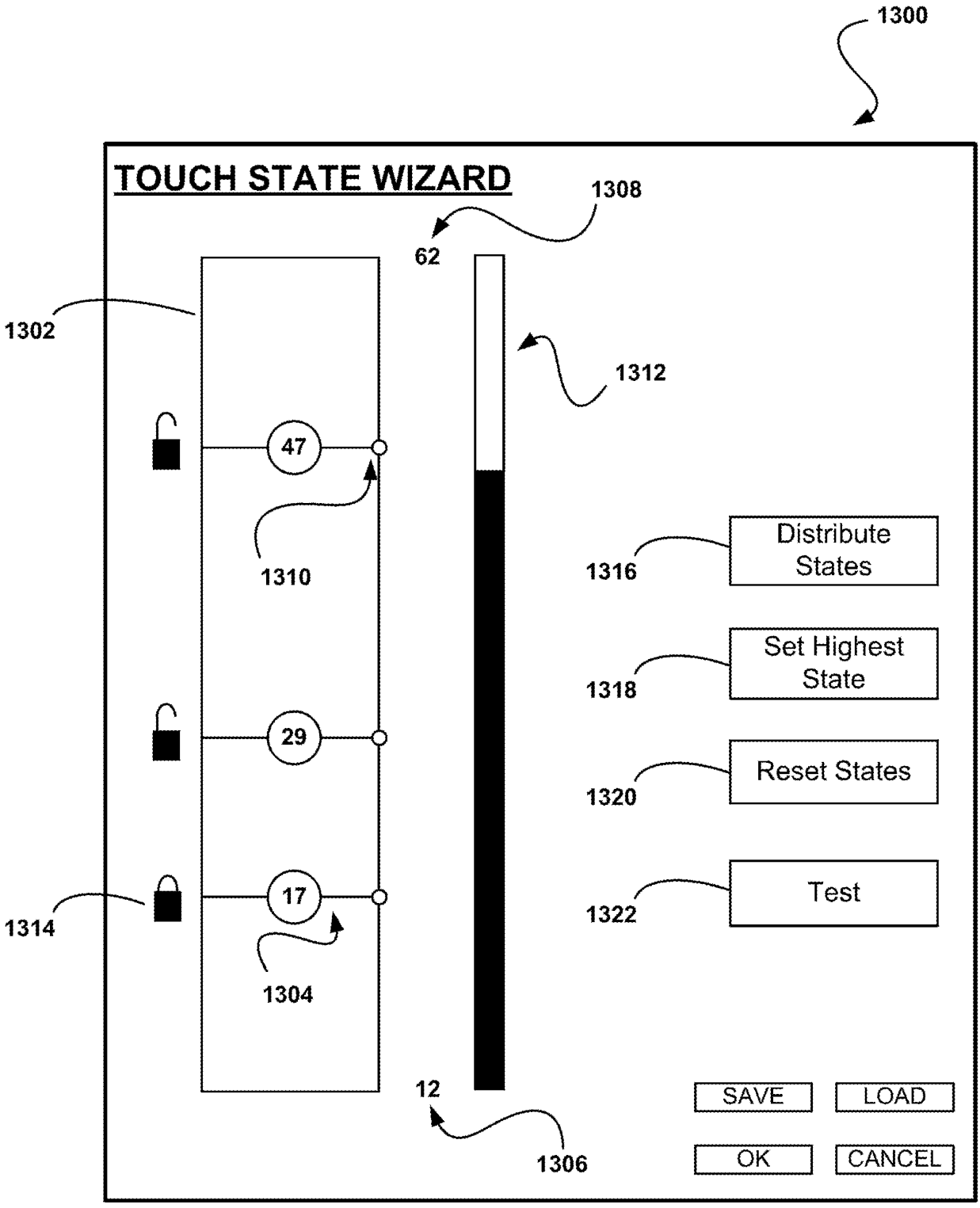
1300
TOUCH STATE WIZARD
1308
62
1302
1312
47
1310
1316
Distribute States
1318
Set Highest State
29
1320
Reset States
1322
Test
1314
17
1304
12
1306
SAVE
LOAD
OK
CANCEL

FIGURE 13

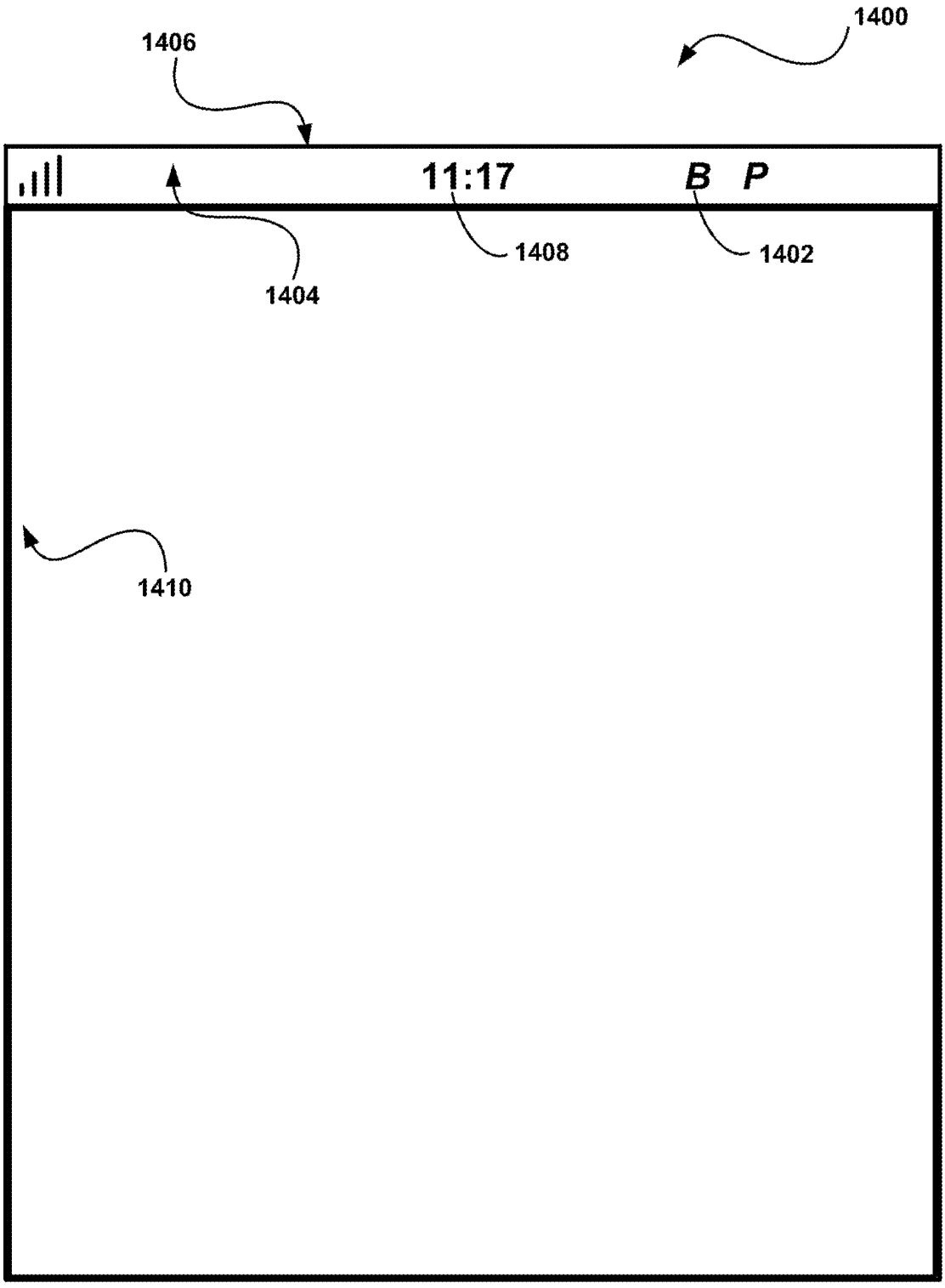

FIGURE 14

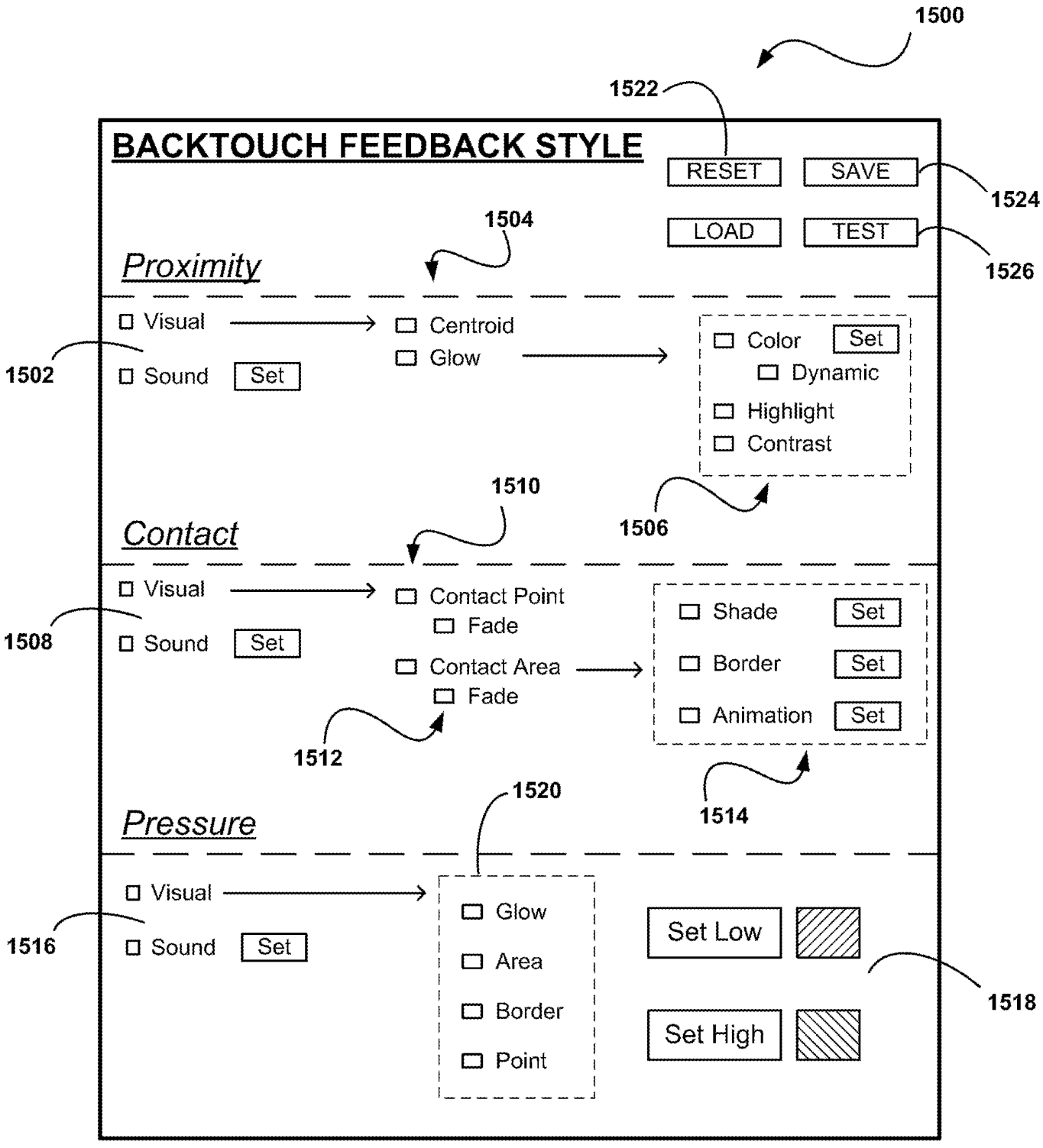
1500
1522
BACKTOUCH FEEDBACK STYLE
RESET
SAVE
1524
LOAD
TEST
1526
1504
Proximity
Visual
Sound
Set
1502
Centroid
Glow
Color
Set
Dynamic
Highlight
Contrast
1506
1510
Contact
Visual
Sound
Set
1508
Contact Point
Fade
Contact Area
Fade
1512
Shade
Set
Border
Set
Animation
Set
1514
1520
Pressure
Visual
Sound
Set
1516
Glow
Area
Border
Point
Set Low
Set High
1518

FIGURE 15

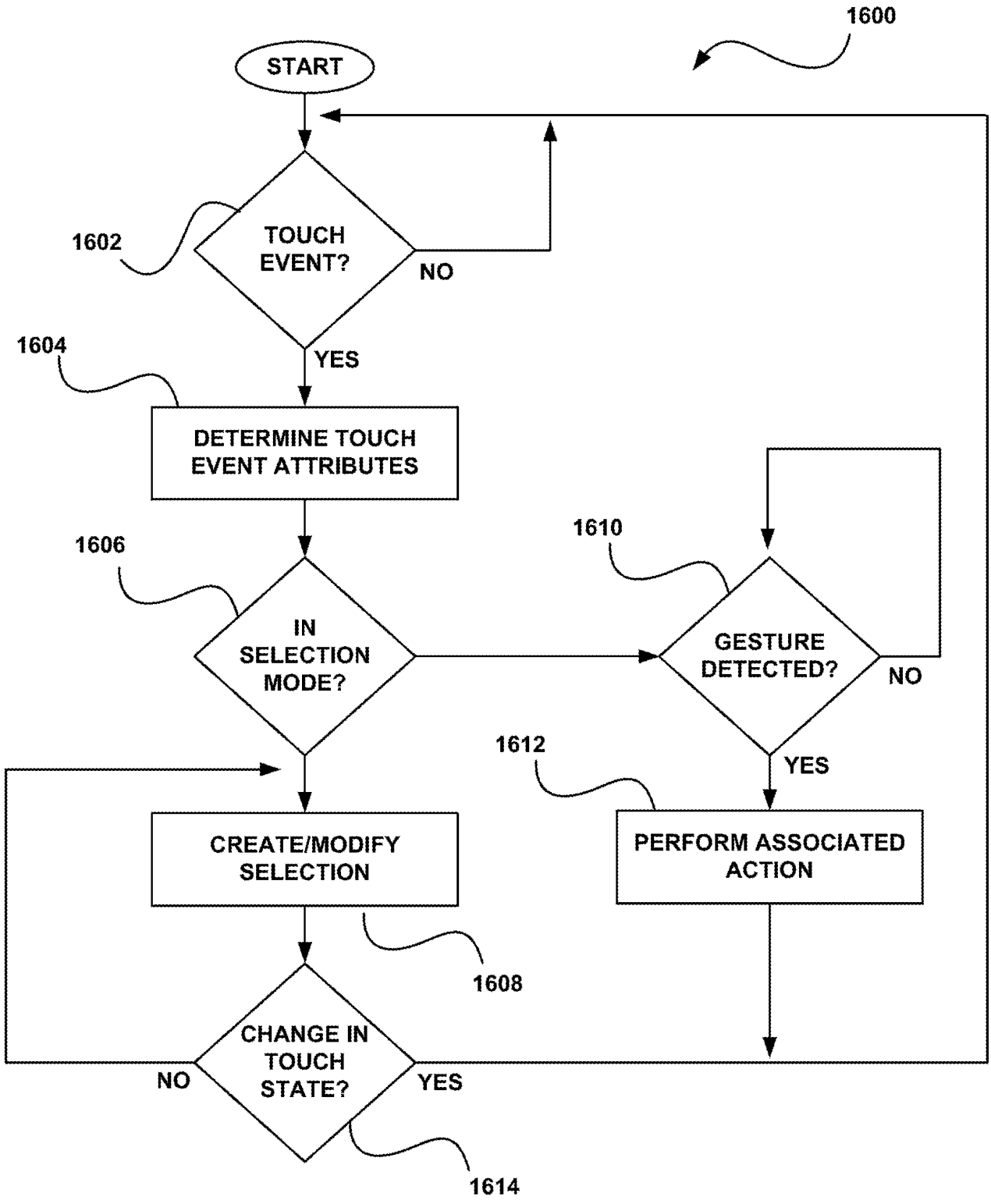
1600
START
1602
TOUCH EVENT?
NO
YES
1604
DETERMINE TOUCH EVENT ATTRIBUTES
1606
IN SELECTION MODE?
1610
GESTURE DETECTED?
NO
YES
1612
CREATE/MODIFY SELECTION
PERFORM ASSOCIATED ACTION
1608
CHANGE IN TOUCH STATE?
NO
YES
1614

FIGURE 16

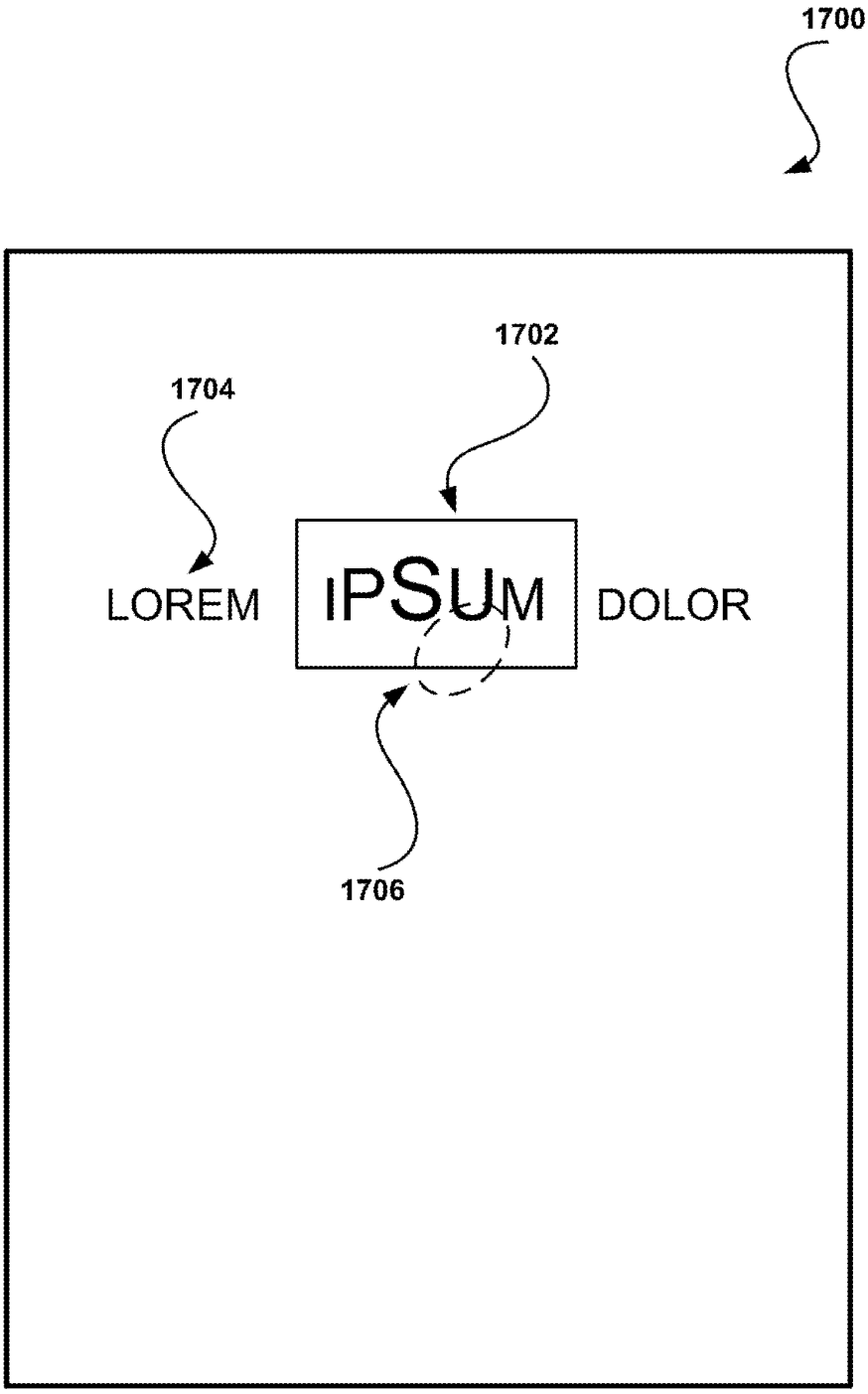

FIGURE 17

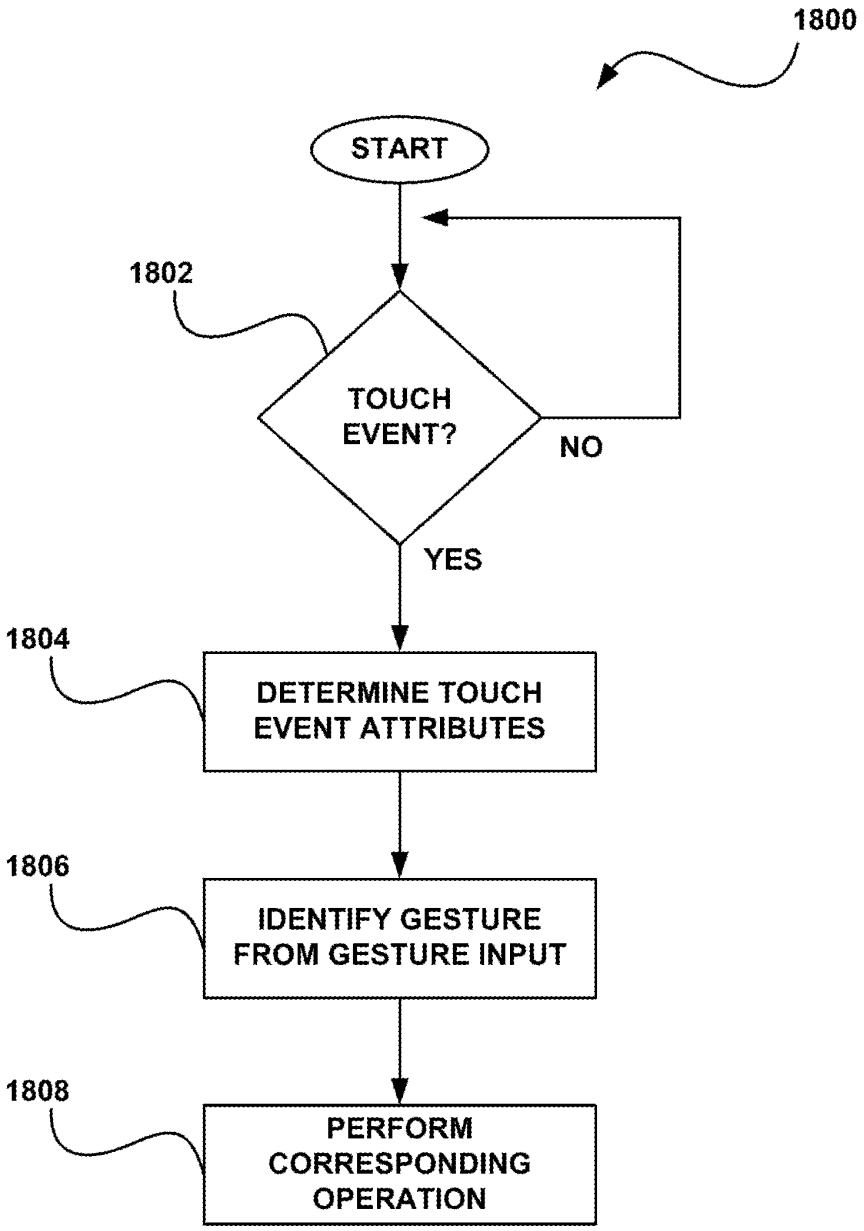
1800
START
1802
TOUCH EVENT?
NO
YES
1804
DETERMINE TOUCH EVENT ATTRIBUTES
1806
IDENTIFY GESTURE FROM GESTURE INPUT
1808
PERFORM CORRESPONDING OPERATION

FIGURE 18

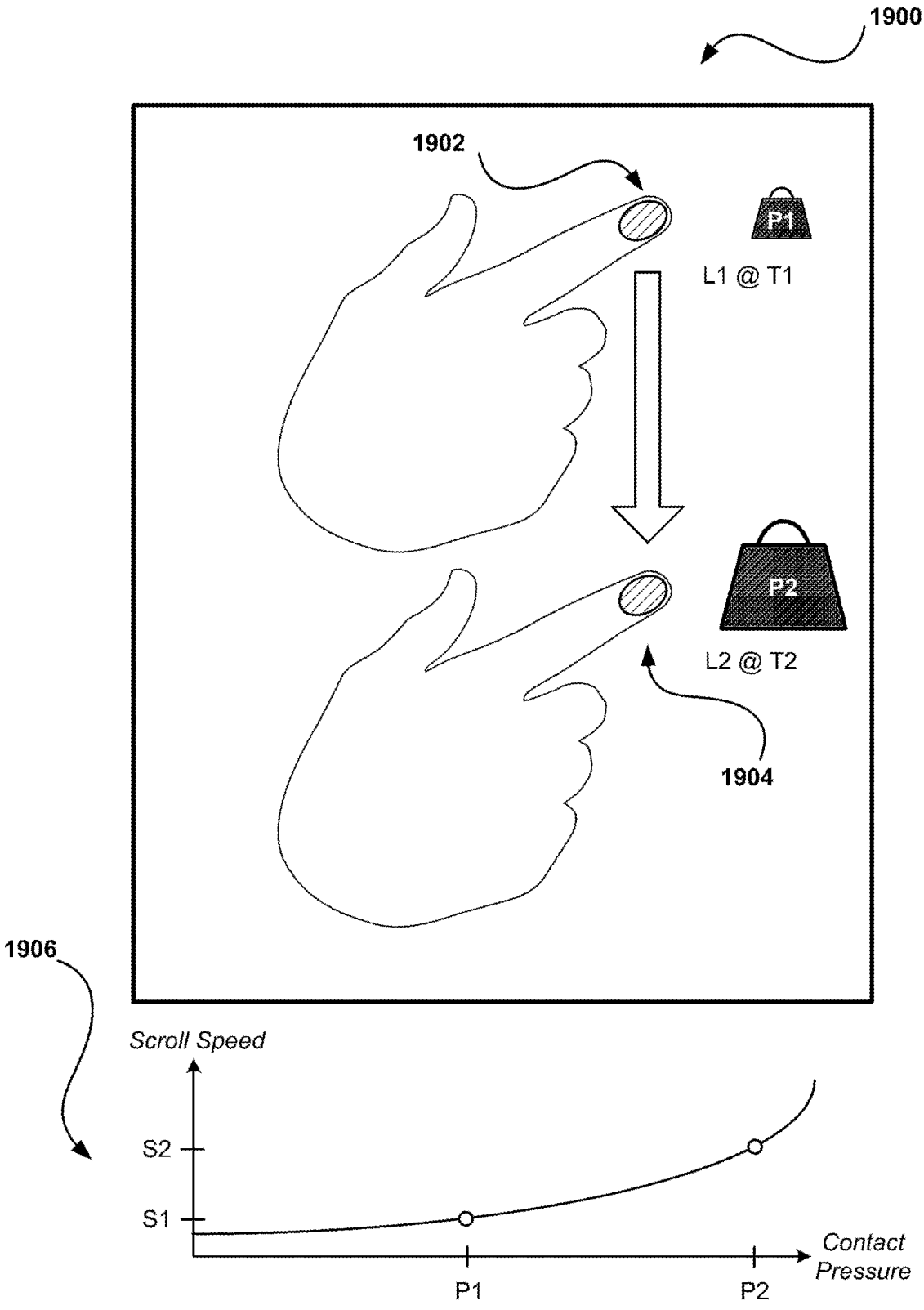
1900
1902
P1
L1 @ T1
P2
L2 @ T2
1904
1906
Scroll Speed
S2
S1
Contact Pressure
P1
P2

FIGURE 19

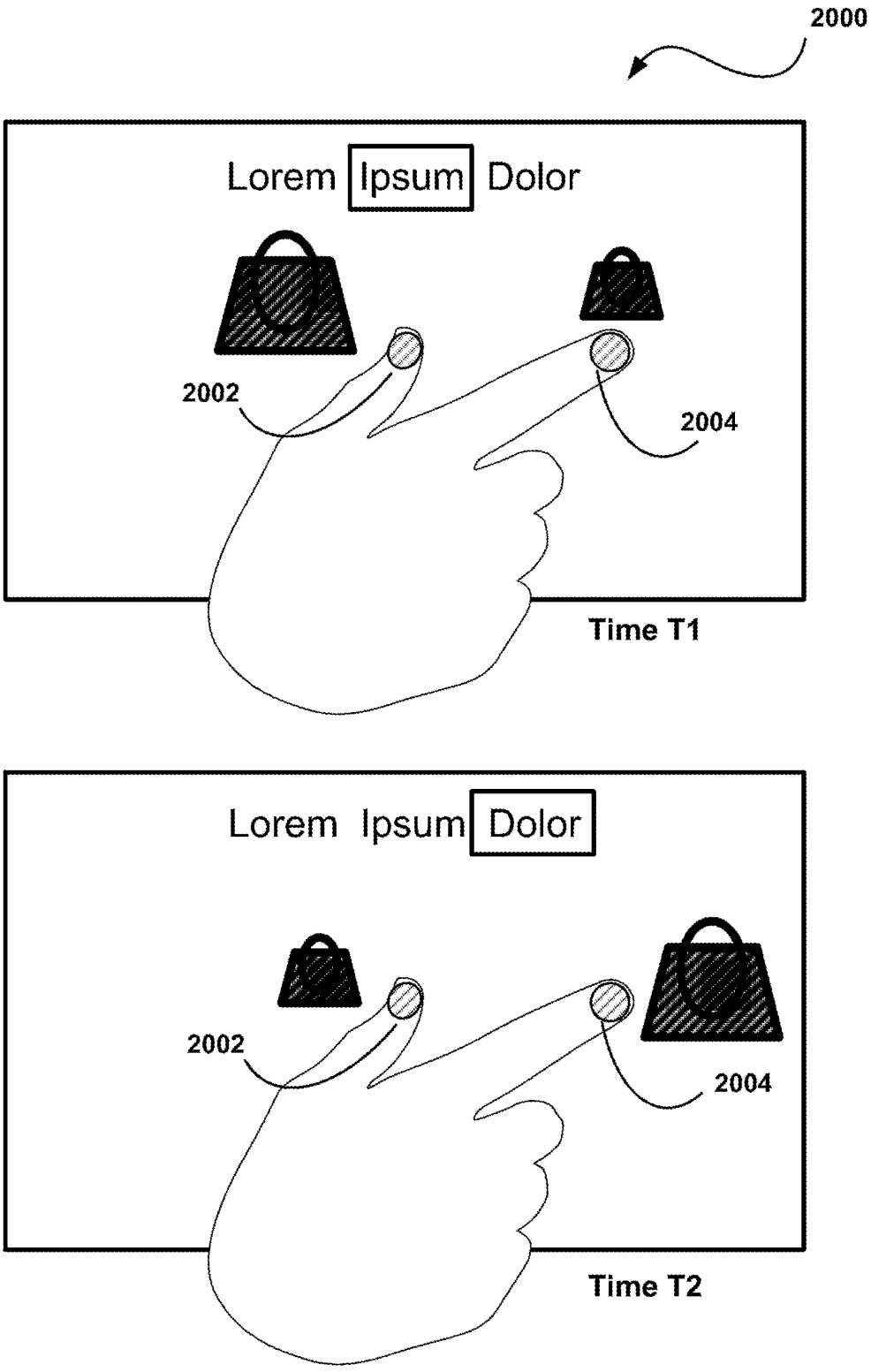
2000
Lorem Ipsum Dolor
2002
2004
Time T1
Lorem Ipsum Dolor
2002
2004
Time T2

FIGURE 20

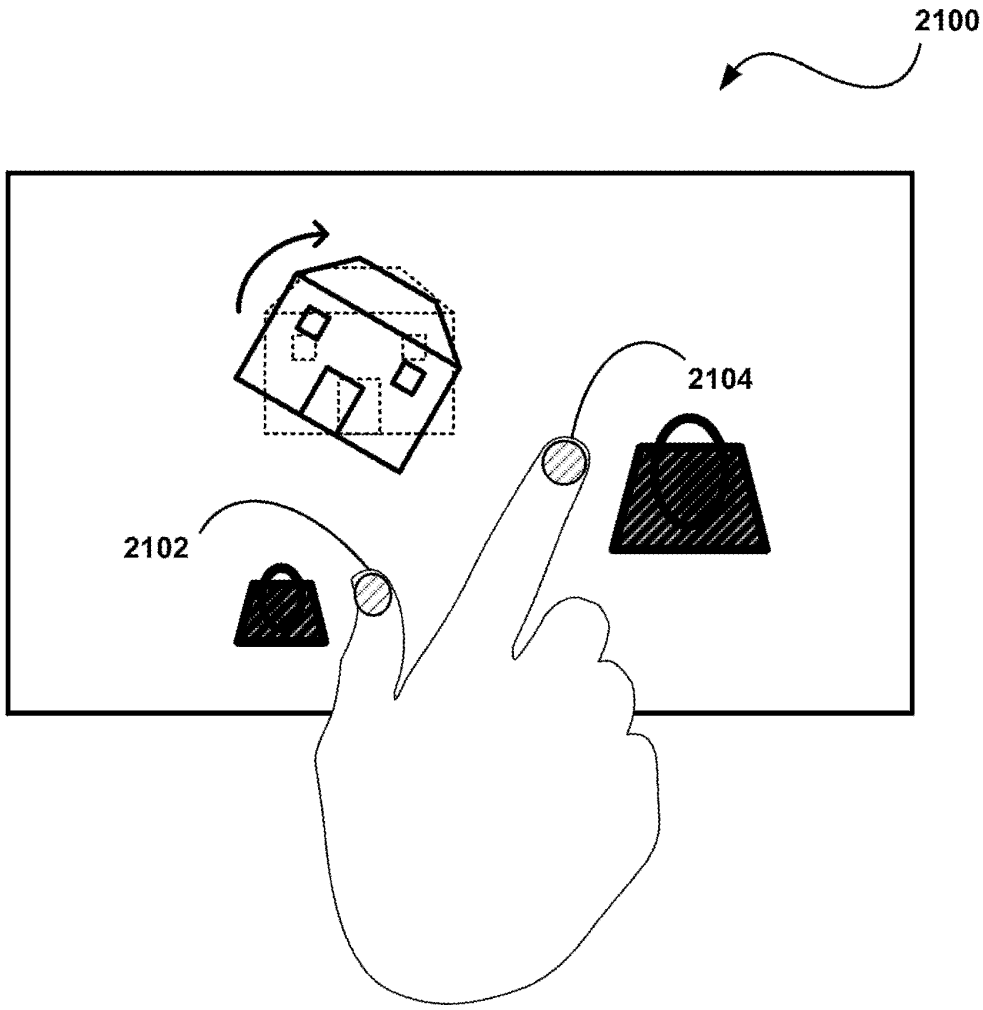

FIGURE 21

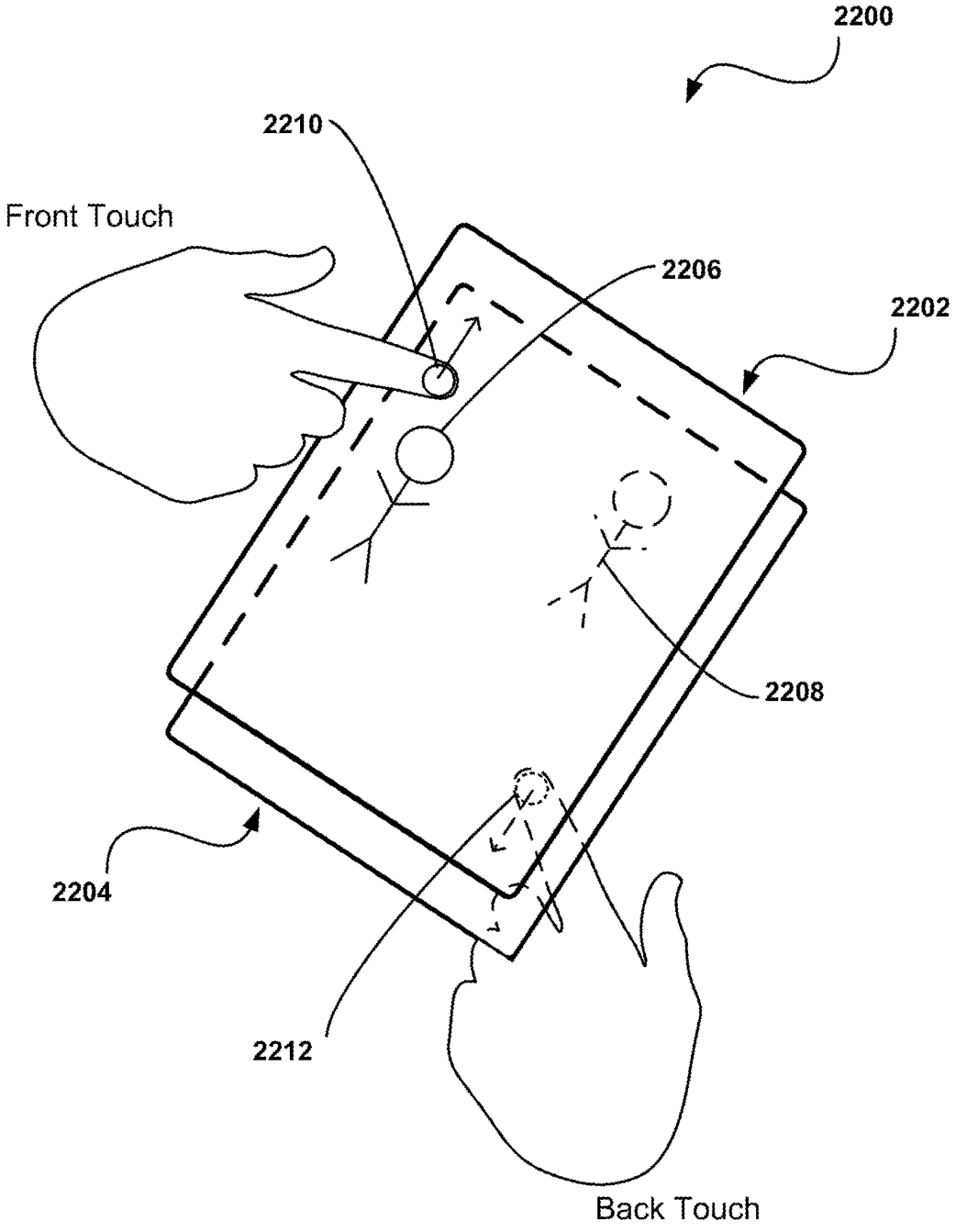

FIGURE 22

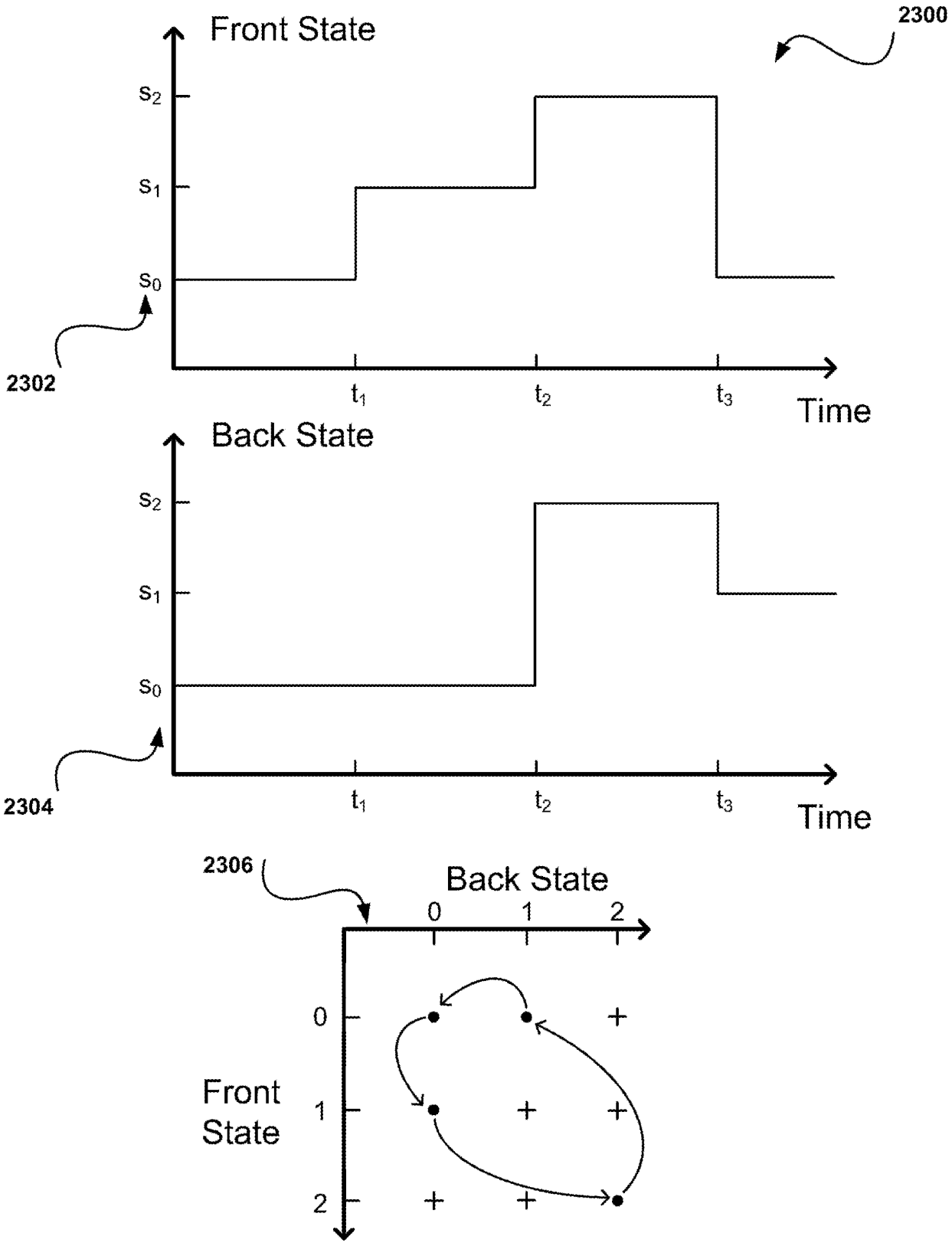
2300
Front State
s_2
s_1
s_0
2302
t_1
t_2
t_3
Time
Back State
s_2
s_1
s_0
2304
t_1
t_2
t_3
Time
2306
Back State
0
1
2
0
1
2
Front State
+

FIGURE 23

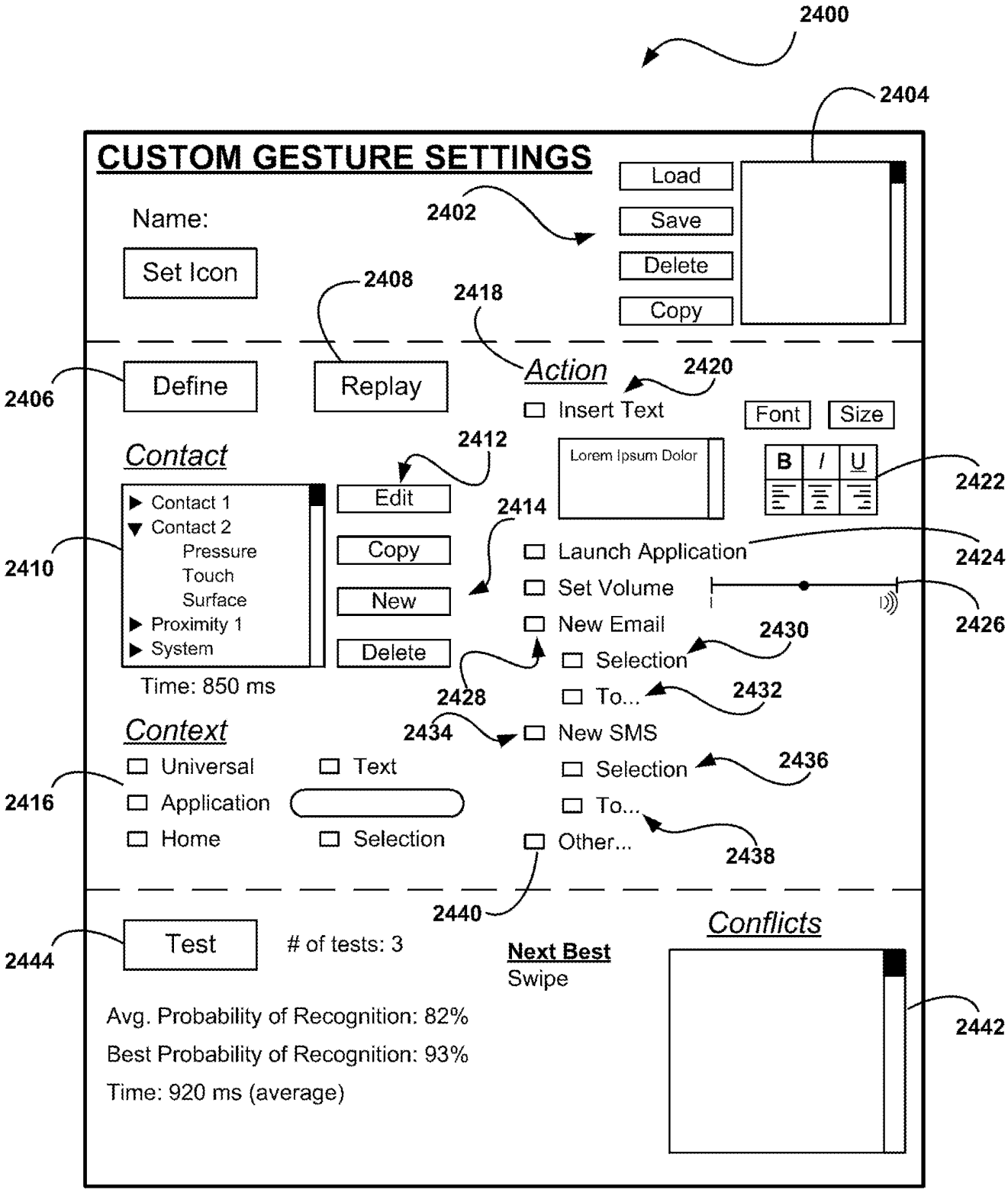
2400
2404
CUSTOM GESTURE SETTINGS
Load
Save
Delete
Copy
Name:
2402
Set Icon
2408
2418
Define
Replay
Action
2420
2406
Insert Text
Font
Size
Contact
2412
Lorem Ipsum Dolor
B
I
U
2422
Edit
2414
Contact 1
Contact 2
Pressure
Touch
Surface
Proximity 1
System
Copy
New
Delete
2410
Launch Application
2424
Set Volume
2426
New Email
2430
Selection
To...
2432
Time: 850 ms
2428
2434
Context
New SMS
Universal
Text
Selection
2436
2416
Application
To...
Home
Selection
Other...
2438
2440
Test
2444
# of tests: 3
Next Best
Swipe
Conflicts
Avg. Probability of Recognition: 82%
Best Probability of Recognition: 93%
Time: 920 ms (average)
2442

FIGURE 24

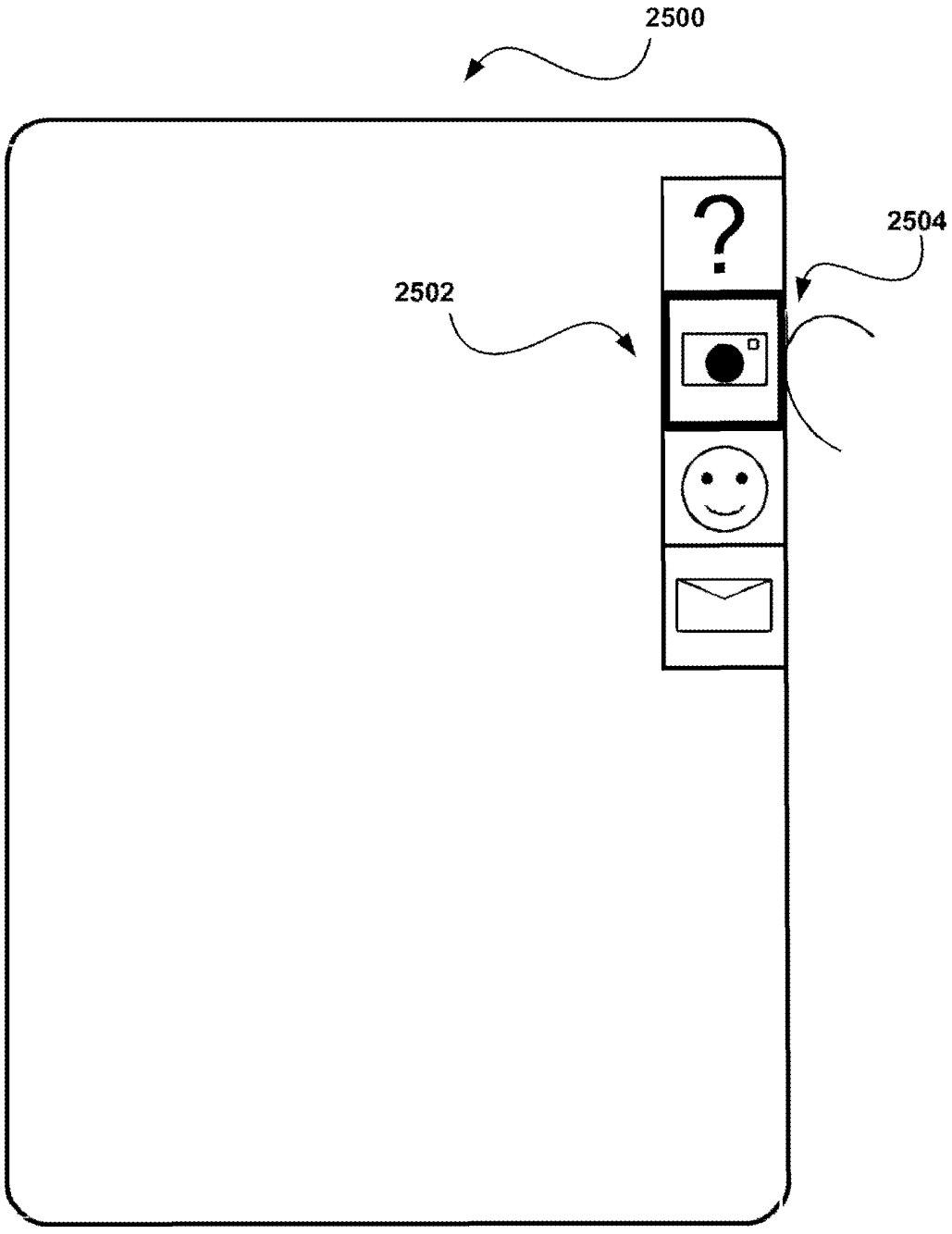

FIGURE 25

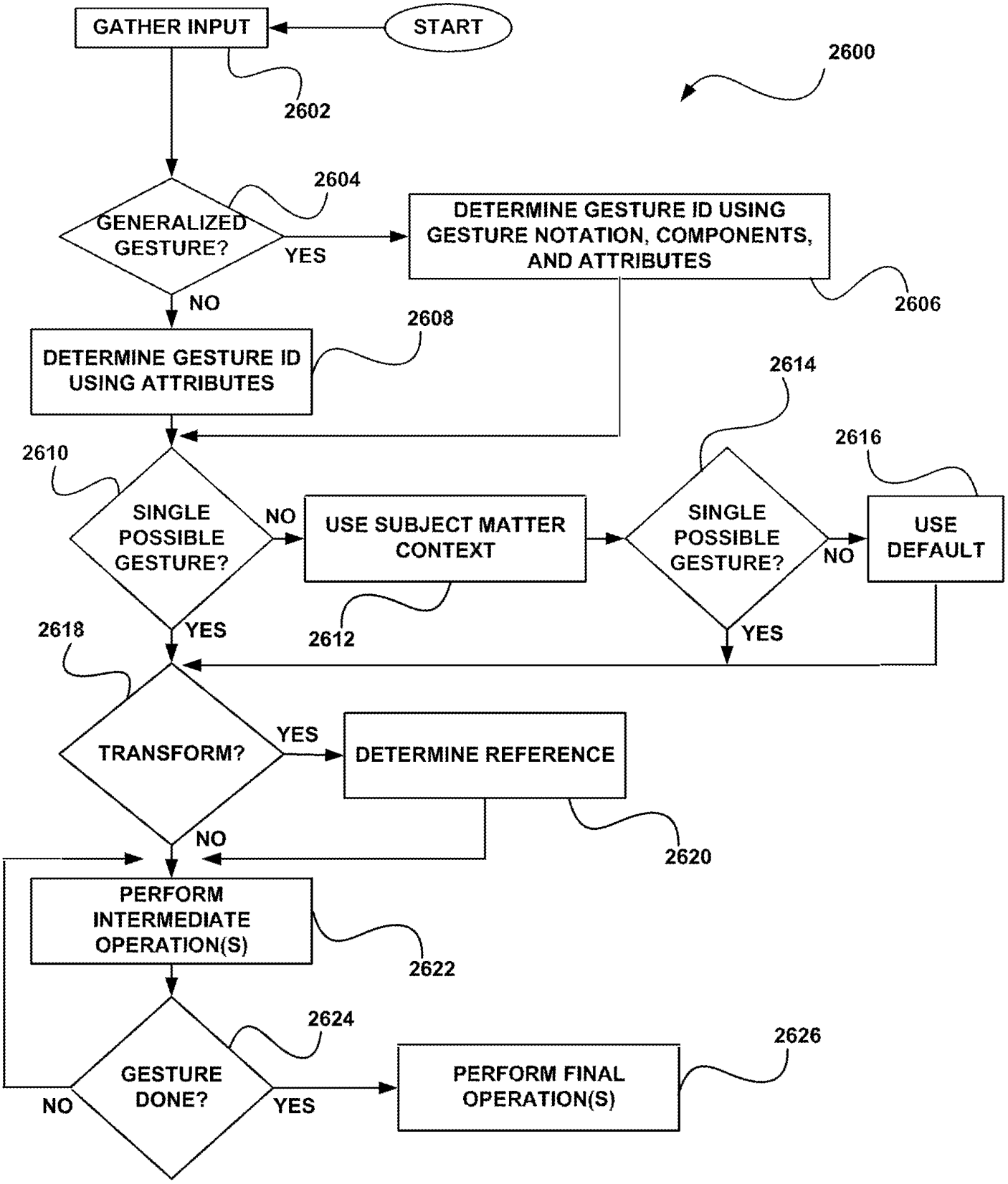
START
GATHER INPUT
2602
2600
2604
GENERALIZED GESTURE?
YES
NO
DETERMINE GESTURE ID USING GESTURE NOTATION, COMPONENTS, AND ATTRIBUTES
2606
DETERMINE GESTURE ID USING ATTRIBUTES
2608
2610
SINGLE POSSIBLE GESTURE?
NO
YES
USE SUBJECT MATTER CONTEXT
2612
2614
SINGLE POSSIBLE GESTURE?
NO
YES
2616
USE DEFAULT
2618
TRANSFORM?
YES
NO
DETERMINE REFERENCE
2620
PERFORM INTERMEDIATE OPERATION(S)
2622
2624
GESTURE DONE?
NO
YES
2626
PERFORM FINAL OPERATION(S)

FIGURE 26

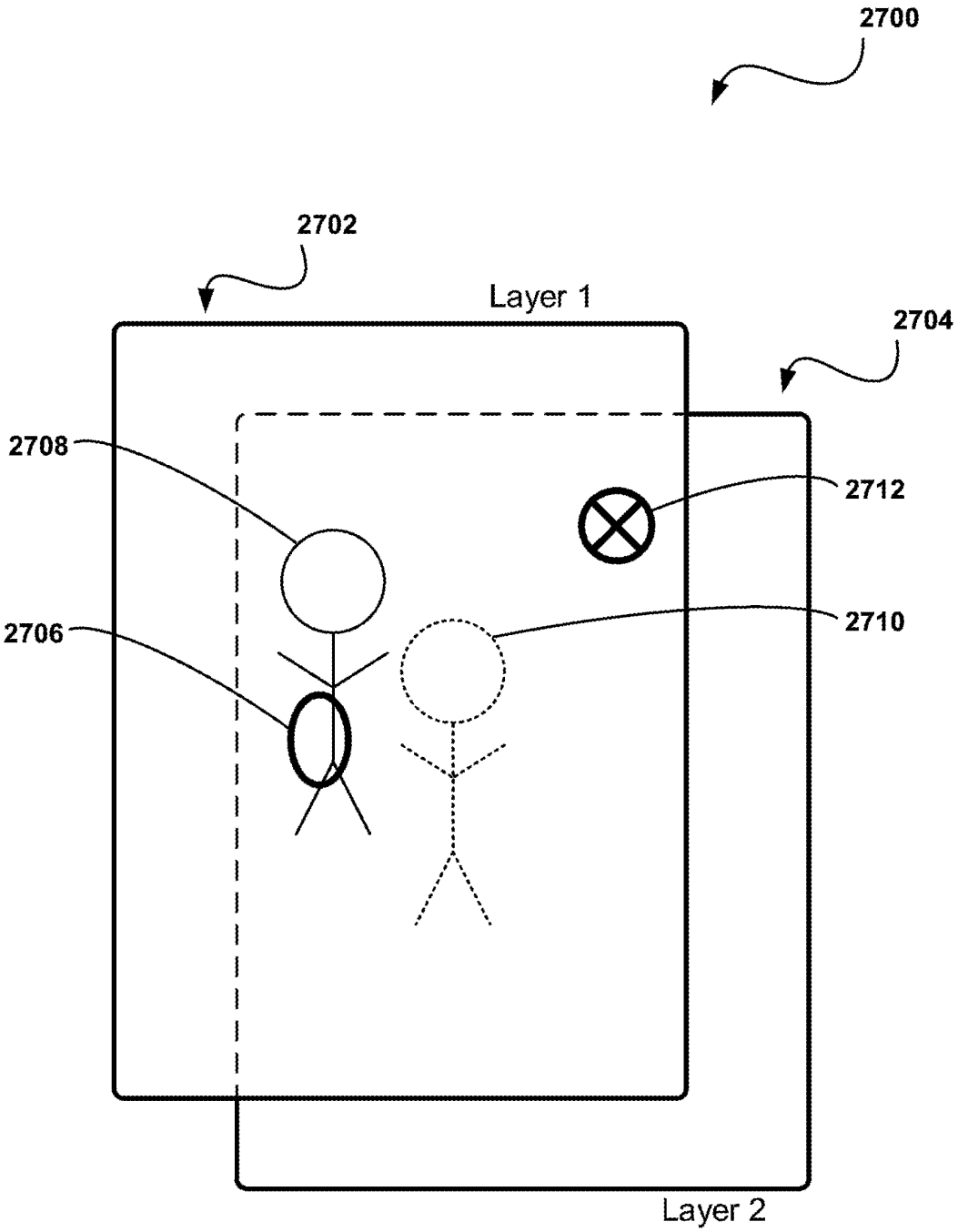

FIGURE 27

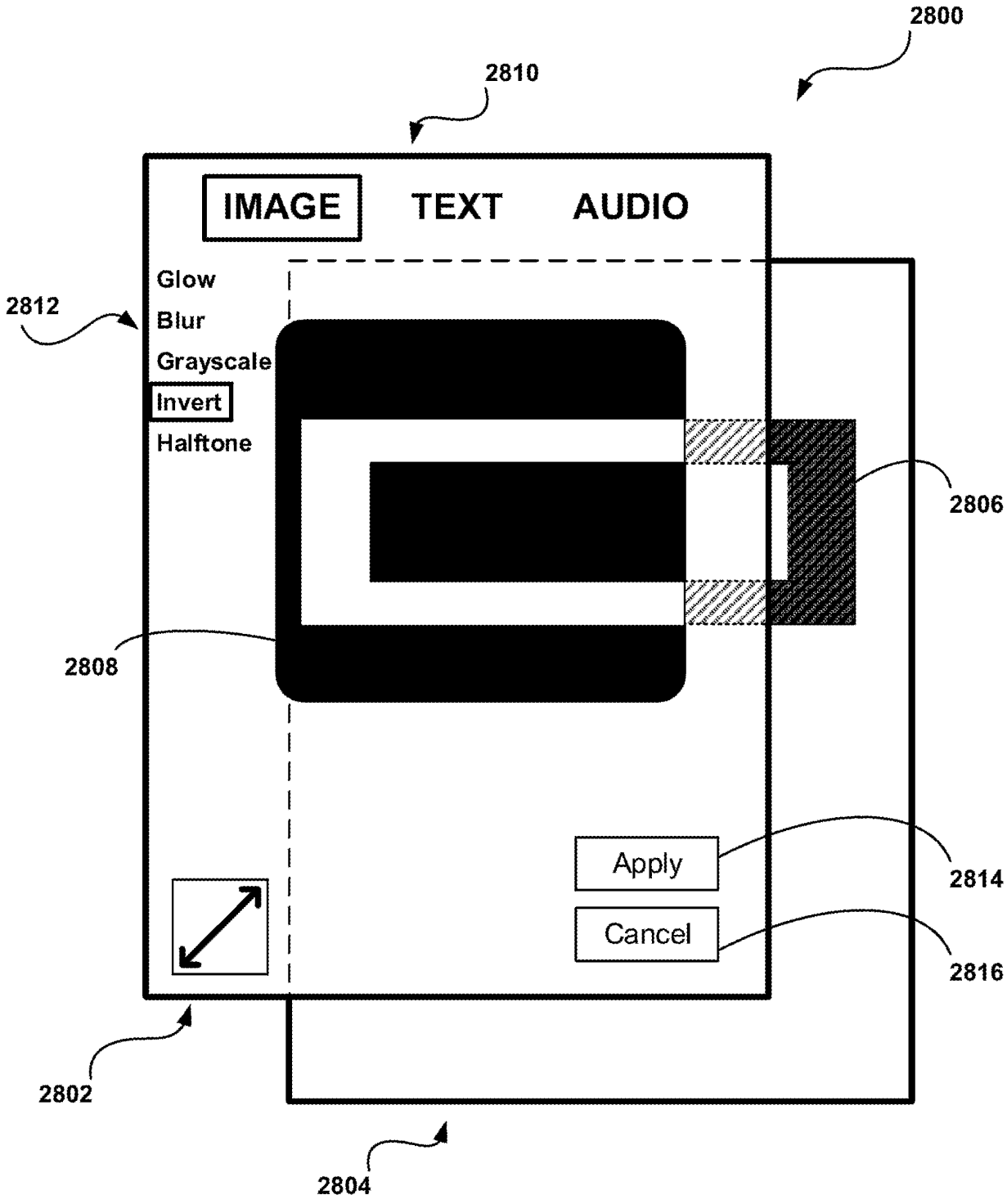
2800
2810
IMAGE
TEXT
AUDIO
2812
Glow
Blur
Grayscale
Invert
Halftone
2806
2808
Apply
2814
Cancel
2816
2802
2804

FIGURE 28

DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is a continuation of and claims priority to U.S. Patent Application No. 16/708,418filed 12/09/2019, which in turn is a continuation of and claims priority to U.S. Patent Application No. 16/377,142 filed 04/05/2019 which, in turn, is a continuation of and claims priority to U.S. Patent Application No. 16/153,763 filed 10/06/2018, now U.S. Pat. No. 10,275,086, which, in turn, is a continuation of and claims priority to U.S. Patent Application No. 15/072,354, filed 03/16/2016, now U.S. Pat. No. 10,133,397; which, in turn, is a continuation of and claims priority to U.S. Patent Application No. 13/567,004, filed 08/03/2012, now U.S. Pat. No.: 9,417,754; which, in turn, claims priority to U.S. Provisional Application No. 61/515,835, filed August 5, 2011, U.S. Provisional Application No. 61/566,577, filed December 2, 2011, U.S. Provisional Application No.61/569,213, filed December 9, 2011, and U.S. Provisional Application No. 61/581,918, filed December 30, 2011, the entire contents of all of which are incorporated herein by reference.

[0002] If any definitions (e.g., figure reference signs, specialized terms, examples, data, information, etc.) from any related material (e.g., parent application, other related application, material incorporated by reference, material cited, extrinsic reference, etc.) conflict with this application (e.g., abstract, description, summary, claims, etc.) for any purpose (e.g., prosecution, claim support, claim interpretation, claim construction, etc.), then the definitions in this application shall apply.

BACKGROUND AND FIELD OF INVENTION

[0003] Embodiments of the present invention generally relate to touch screens.

BRIEF SUMMARY

[0004] In one embodiment, an apparatus and associated method are provided, comprising: at a device having a display and a touch-sensitive surface: displaying a first user interface of a first application on the display; while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets one or more criteria; in response to detecting the first input by the first contact that meets the one or more criteria: in accordance with a determination that the first application is subject to the first contact meeting the one or more criteria, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface.

[0005] In another embodiment, an apparatus and associated method are provided, comprising: at a device having a display and a touch-sensitive surface: displaying a first user interface of a first application on the display; while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets navigation-gesture criteria, wherein the navigation-gesture criteria require that the first input includes a movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the navigation-gesture criteria to be met; in response to detecting the first input by the first contact that meets the navigation-gesture criteria: in accordance with a determination that the first application is not protected, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and in accordance with a determination that the first application is protected, maintaining display of the first user interface of the first application without displaying the respective other user interface.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0006] So that the features of various embodiments of the present invention can be understood, a more detailed description, briefly summarized above, may be had by reference to various embodiments, some of which are illustrated in the accompanying drawings. It is to be noted, however, that the accompanying drawings illustrate only embodiments and are therefore not to be considered limiting of the scope of various embodiments of the invention, for the invention may admit to other effective embodiments. The following detailed description makes reference to the accompanying drawings that are now briefly described.

[0007] So that the features of various embodiments of the present invention can be understood, a more detailed description, briefly summarized above, may be had by reference to various embodiments, some of which are illustrated in the accompanying drawings. It is to be noted, however, that the accompanying drawings illustrate only embodiments and are therefore not to be considered limiting of the scope of the invention, for the invention may admit to other effective embodiments. The following detailed description makes reference to the accompanying drawings that are now briefly described.

[0008] Figure 1 illustrates a network architecture, in accordance with one embodiment.

[0009] Figure 2 shows a representative hardware environment that may be associated with the servers and/or clients of Figure 1, in accordance with one embodiment.

[0010] Figure 3 shows a method for altering a user experience based on a received signal, in accordance with one embodiment.

[0011] Figure 4 shows a method for defining a selection made within a user interface based in part on contact pressure, in accordance with one embodiment.

[0012] Figure 5 shows a pressure-sensitive user interface for making a selection, in accordance with one embodiment.

[0013] Figure 6 shows a method for determining the context of a contact pressure-based selection and choosing an appropriate selection function, in accordance with one embodiment.

[0014] Figure 7 shows a device having a backtouch interface, in accordance with one embodiment.

[0015] Figure 8 shows a method for providing feedback to the user of a backtouch interface, in accordance with one embodiment.

[0016] Figure 9 shows a pressure-sensitive user interface for making a selection using a backtouch interface, in accordance with one embodiment.

[0017] Figure 10 shows a user interface for defining settings associated with a backtouch interface, in accordance with one embodiment.

[0018] Figure 11 shows a user interface for defining settings associated with a pressure-sensitive interface, in accordance with one embodiment.

[0019] Figure 12 shows a method for assisting a user in defining touch states, in accordance with one embodiment.

[0020] Figure 13 shows a user interface for assisting a user in defining touch states, in accordance with one embodiment.

[0021] Figure 14 shows a user interface for indicating that a backtouch or pressure-sensitive interface is activated, in accordance with one embodiment.

[0022] Figure 15 shows a user interface for defining a backtouch feedback style, in accordance with one embodiment.

[0023] Figure 16 shows an alternative method for defining a selection made within a user interface based in part on contact pressure, in accordance with one embodiment.

[0024] Figure 17 shows a user interface for performing operations on a selection, in accordance with one embodiment.

[0025] Figure 18 shows a method for utilizing contact pressure-based gestures, in accordance with one embodiment.

[0026] Figure 19 shows an example of a contact pressure-based gesture for scrolling a text field, in accordance with one embodiment.

[0027] Figure 20 shows an example of a multitouch pressure gesture for indicating a direction, in accordance with one embodiment.

[0028] Figure 21 shows an example of a multitouch pressure gesture for indicating a rotation, in accordance with one embodiment.

[0029] Figure 22 shows a 3D layered user interface, in accordance with one embodiment.

[0030] Figure 23 shows exemplary pattern-based gestures, in accordance with one embodiment.

[0031] Figure 24 shows a user interface for defining custom gestures, in accordance with one embodiment.

[0032] Figure 25 shows a user interface for providing quick access to favorite operations, in accordance with one embodiment.

[0033] Figure 26 shows a method for gesture differentiation, in accordance with one embodiment.

[0034] Figure 27 shows a 3D layered user interface having a clipboard layer, in accordance with one embodiment.

[0035] Figure 28 shows a 3D layered user interface having an operation layer, in accordance with one embodiment.

[0036] While the invention is susceptible to various modifications, combinations, and alternative forms, various embodiments thereof are shown by way of example in the drawings and will herein be described in detail. It should be understood, however, that the accompanying drawings and detailed description are not intended to limit the invention to the particular form disclosed, but on the contrary, the intention is to cover all modifications, combinations, equivalents and alternatives falling within the spirit and scope of the present invention as defined by the relevant claims.

DETAILED DESCRIPTION

[0037] Terms that are special to the field of the invention or specific to this description may, in some circumstances, be defined in this description. Further, the first use of such terms (which may include the definition of that term) may be highlighted in italics just for the convenience of the reader. Similarly, some terms may be capitalized, again just for the convenience of the reader. It should be noted that such use of italics and/or capitalization and/or other formatting, highlighting etc, by itself, should not be construed as somehow limiting such terms: beyond any given definition, and/or to any specific embodiments disclosed herein, etc.

[0038] In this description there may be multiple figures that depict similar structures with similar parts or components. Thus, as an example, to avoid confusion an Object in Figure 1 may be labeled and/or referenced as "Object (1)" and a similar, but not identical, Object in Figure 2 is labeled and/or referenced as "Object (2)", etc. Again, it should be noted that use of such labeling and reference manner, by itself, should not be construed as somehow limiting such terms: beyond any given definition, and/or to any specific embodiments disclosed herein, etc.

[0039] In the following detailed description and in the accompanying drawings, specific terminology and images are used in order to provide a thorough understanding. In some instances, the terminology and images may imply specific details that are not required to practice all embodiments. Similarly, the embodiments described and illustrated are representative and should not be construed as precise representations, as there are prospective variations on what is disclosed that may be obvious to someone with skill in the art. Thus this disclosure is not limited to the specific embodiments described and shown but embraces all prospective variations that fall within its scope. For brevity, not all steps may be detailed, where such details will be known to someone with skill in the art having benefit of this disclosure.

[0040] In the following detailed description and in the accompanying drawings, some embodiments and their constituent parts may have been simplified for clarity of explanation. In some cases, a complex system may be broken down into its constituent parts and pieces and each part or piece explained separately. The explanations for each part or piece may possibly use a separate figure along with accompanying text to describe variations and alternative implementations. In some cases, complex elements have been simplified to more clearly define their function. In many cases, a system may be comprised of multiple complex elements with each element being a more complex version of a simple part or piece that has been explained separately. It is not possible to describe every possible combination of complex elements in all possible systems. Thus, the description herein is not limited to just the specific embodiments of parts or pieces described with each figure or in an accompanying explanation, or even those example systems described, but rather the possible combinations of complex elements based on the parts and pieces described.

[0041] Definitions

[0042] A computer system (e.g., a host system, host, computer, etc.) may include one or more storage systems (or storage subsystems, disk systems, disk subsystems, etc.) that may include storage arrays that include storage devices. A storage device may include a solid-state storage device, hard-disk drive (HD or HDD), or other device (e.g., tape, optical media, etc.).

[0043] A solid-state storage device may refer to a solid-state disk (SSD), but the solid-state storage device is not necessarily an SSD. A solid-state storage device may, for example, comprise memory devices such as flash memory devices (e.g., NAND, NOR, MLC, SLC, etc.), but may also comprise other forms of solid-state memory devices or memory components (e.g., SRAM, DRAM, MRAM, volatile memory, non-volatile memory, etc.), a combination of different types of solid-state components and/or other memory devices, or a combination of solid-state memory with other types of storage devices (e.g., hybrid disk, etc.). An SSD may be in a form-factor that is a drop-in replacement for a hard-disk (3.5", 2.5" form factors, etc.) or may be in any other form-factor or with any interface (e.g., Compact Flash CF, MultiMediaCard MMC, miniSD, Memory Stick, SmartMedia, TransFlash, Secure Digital SD, DIMM or other memory module form factor, PCI Express Card, mini PCI-E card, etc.). An SSD may use a standard storage interface (e.g., IDE, SAS, SATA, etc.) or an IO bus interface (e.g., PCI, PCI-E, USB, LightPeak, etc.), a networking interface (e.g., Ethernet, FCoE, Infiniband, etc.), a CPU bus interface (e.g., Intel QPI, HyperTransport, etc.), or other interface (e.g., PCI-E over Ethernet, etc.). An SSD in a storage array may have a capacity of more than 100 Gbytes and contain tens of NAND flash memory chips. A typical 1 Gbit NAND flash memory chip may contain 1024 flash blocks with each flash block containing 64 flash pages and each flash page containing 2 kbytes.

[0044] Storage arrays may also include a combination of SSD and HDD, or combinations of various storage devices (e.g., magnetic, optical, tape, solid-state, etc.).

[0045] A solid-state storage device may use a disk controller (e.g., storage controller, controller, ASIC, other chips component(s), etc.) to provide the computer system with a standard storage (e.g., disk, storage networking, etc.) interface (e.g., IDE, SATA, SAS, Fibre Channel (FC), etc.), a standard peripheral (e.g., IO bus, IO attach, etc.) interface (e.g., PCI-E, USB, PCI Express, PCI, etc.), other standard interface (e.g., Ethernet, wireless 802.11, etc.), a proprietary (e.g., non-standard, etc.) interface, a combination of these (e.g., PCI-E over Ethernet, FC over Ethernet (FCoE), etc.), or other storage, networking, interconnect interface(s) etc.

[0046] A storage array controller (often also called disk controller, host-bus adapter, etc.) may be logically located between the computer system and one or more SSDs or HDDs in a disk subsystem. In the context of the present description, the use of the term disk controller has been avoided as a term to describe a controller that controls one or more disks. The term storage array controller has been used herein for a controller that controls one or more disks. In some cases, each disk (HDD or SSD etc.) may have its own disk controller, thus causing potential confusion over terms. Alternative terms for storage array controller may include host-bus adapter, host adapter, host controller. However, the term host-bus adapter (often abbreviated

HBA) and similar terms have been avoided herein to avoid confusion with HBA used here for host block address.

[0047] An SSD may include its own SSD controller, but, in some cases, a storage array controller may have more resources than an SSD controller. A storage array controller may use resources, such as memory, CPU, logic, non-volatile memory, etc., as well as unique information (e.g., because a storage array controller is higher than the SSD controller in the storage array hierarchy, i.e., further from the storage devices) in order to manage and control a storage array as well as provide information to an SSD controller.

[0048] A computer system typically contains one or more CPUs. A CPU may execute (e.g., run, etc.) an operating system (e.g., Microsoft Windows, Linux. MacOS, etc.). An operating system (OS) typically sees a storage array as a collection of disk sectors or just sectors (and sectors may also be called blocks). Disk sectors may be 512 bytes in length (and typically are in the 2011 timeframe). The sectors or blocks of a storage device are typically addressed as logical blocks using a logical block address (LBA).

[0049] To avoid confusion, the term host block address (HBA) is used herein for the LBA used to address a storage array controller. Unless explicitly stated otherwise, it is assumed that the host block size (HBS) is equal to the disk block size (DBS). The HBA may be a composite or union of a logical unit number (LUN) that identifies a logical portion of the storage array or disk or other device in the storage array; an LBA; the virtual machine (VM), if any; a UserID that identifies the user application; a VolumeID that identifies a logical target volume; and other data that may be used for logical access or management purposes. To simplify the description, clarify the figures, and in particular to make it clear that operations may be performed on different LUNs, the LUN may be shown separately from HBA in figures.

[0050] A disk number (D) may identify a disk or other storage device in the storage array. A disk logical block address (DBA) is the LBA that identifies the disk sector on the disk or other storage device. An array block address (ABA) is a composite or union of D and DBA, written <D, DBA>. The storage array may be a RAID array, JBOD, or any other particular type of storage array.

[0051] A disk controller for an HDD or SSD maintains the relationship between an ABA (or the DBA portion of the ABA) and the disk sectors that are physically part of a storage device (often called the physical disk sectors or physical sectors).

[0052] To summarize, with just a single disk, the host may provide an LBA directly to the disk; the disk controller may convert the LBA to the physical disk sector (e.g., for an HDD) or to the PBN (e.g.,for an SSD). In the presence of a storage array controller the host may still provide an LBA, but now to the storage array controller (and thus the LBA may be referred to as an HBA to avoid confusion); the storage array controller may then map this HBA to an ABA and may provide the ABA (or possibly just the DBA portion of the ABA) to the disk; the disk (e.g., an HDD or SSD, etc.) may then convert this DBA or ABA (treating the DBA portion of the ABA as though it were just an LBA, which it is) to a physical disk address: either the physical disk sector (e.g., for an HDD) or PBN (e.g., for an SSD).

[0053] In various embodiments, structures and their functions, operations and algorithms (e.g., methods, functions, etc.) may be described in terms of software operations, code and pseudo-code. It should be noted that the algorithms may be performed in hardware; software; firmware; microcode; a combination of hardware, software, firmware or microcode; or in any other manner that performs the same function and/or has the same effect. In various embodiments, the data structures, or parts of the structures, may be stored in the storage array controller in SRAM, DRAM, embedded flash, or other memory. Additionally, the data structures, or parts of them, may be stored outside the storage array controller. For example, the data structures may be stored on any of the storage devices of a storage array (the local storage or remote storage, i.e., remote from the storage array connected to the storage array controller) or on a host system (the local host or a remote host, i.e., remote from the host connected to the storage array controller).

[0054] A storage command may be directed to a storage device and may specify one or more operations, such as read, write, etc. A storage command may be referred to as a disk command or just command. To help prevent such confusion, the term storage command may be used when referencing commands in general. The term disk command (or disk write, etc.) may be utilized for the command as it arrives at (or is received by) the disk (either SSD or HDD, usually via a standard interface or storage bus, such as SATA, etc.). The term host command (or host write, etc.) may be utilized for the command as it leaves (or is transmitted by) the OS. A disk command may be the same as a host command when there is a direct connection between the OS on a host system and a single disk.

[0055] A storage array controller may perform certain functions instead of (or in addition to) an OS running on a host system; and a storage array controller may also perform certain functions instead of (or in addition to) disk controller(s) in a storage array. A storage array controller may be logically located between a host system and storage array (or disk subsystem, storage subsystem, etc.). Each disk may contain its own disk controller, but a storage array controller may have more resources than a disk controller. The algorithms described here allow a storage array controller and attached storage accelerator units (SAUs) to use resources, such as memory, non-volatile memory, etc., as well as unique information (because a storage array controller is higher than a disk controller in a storage array hierarchy, i.e., further from the storage devices) in order to manage and control a storage array as well as provide information to disk controller(s). For example, a storage array controller may be aware of LUNs but a disk controller may not be aware of LUNs. This hierarchical management approach has advantages and potential uses that are explained throughout this description in the forms of various algorithms that may be employed by themselves or in combination.

[0056] A device driver is typically (though not necessarily) software that may be manufactured with and sold with a storage array controller. In various embodiments, the device driver may be implemented in software, hardware, firmware or a combination, and may be designed, manufactured and/or sold separately.

[0057] In one embodiment, a computer system may comprise multiple virtual machines (VMs), each VM including an operating system, and a hypervisor.

[0058] Each OS may include a file system and one or more storage drivers. The file system (sometimes considered part of an OS) may translate or convert from file-based access (i.e., in terms of directories, file names and offsets, etc.) to disk-based access (i.e., in terms of LBAs etc.). The storage driver (sometimes considered part of an OS) may be responsible for handling a disk or other storage device(s). The storage driver may be separate and distinct from the device driver. The storage driver may or may not be part of a storage stack, which is the software that controls access to a file system.

[0059] In the context of solid-state storage, typically flash memory, when a flash page (or some other portion) of a storage device is no longer required (i.e., it is obsolete, no longer valid, or is invalid, etc.) that flash page may be marked as dirty. When an entire flash block (e.g., typically between 16 to 256 flash pages) is dirty, the entire flash block may be erased and free space may be reclaimed. If free space on the device is low, a flash block may be chosen that has some dirty flash pages and some clean (i.e., pages that are not dirty, are good, or valid, etc.) flash pages. The clean flash pages may be transferred (i.e., written, moved or copied) to a new flash block. All the original clean flash pages may be marked as dirty and the old flash block may be erased. In the context of solid-state storage, this process of transferring flash pages to new flash blocks and erasing old flash blocks may be referred to as garbage collection

[0060] Example embodiments described in this disclosure include one or more computer systems with one or more central processor units (CPUs) and possibly one or more I/O systems coupled to one or more storage systems that contain one or more storage array controllers and one or more storage devices.

[0061] In one embodiment, the storage system may include one or more bus structures. Depending on the constraints (e.g., signaling methods used, the intended operating frequencies, space, power, cost, and other constraints, etc.) various alternate bus structures may be used. A point-to-point bus may provide the optimal performance in systems requiring high-speed interconnections, due to the reduced signal degradation compared to bus structures having branched signal lines, switch devices, or stubs. However, when used in systems requiring communication with multiple devices or subsystems, a point-to-point or other similar bus will often result in significant added cost (e.g., component cost, board area, increased system power, etc.) and may reduce the potential memory density due to the need for intermediate devices (e.g., buffers, re-drive circuits, etc.).

[0062] Functions and performance similar to that of a point-to-point bus can be obtained by using switch devices. Switch devices and other similar solutions offer advantages (e.g., increased memory packaging density, lower power, etc.) while retaining many of the characteristics of a point-to-point bus. Multi-drop bus solutions provide an alternate solution, and though often limited to a lower operating frequency can offer a cost/performance advantage for many applications. Optical bus solutions permit significantly increased frequency and bandwidth potential, either in point-to-point or multi-drop applications, but may incur cost and space impacts.

[0063] Although not necessarily shown in all the Figures, the storage systems may also include one or more separate control (e.g., command distribution, information retrieval, data gathering, reporting

mechanism, signaling mechanism, register read/write, configuration, etc.) buses (e.g., a presence detect bus, an I2C bus, an SMBus, combinations of these and other buses or signals, etc.) that may be used for one or more purposes including the determination of the storage device and/or storage system attributes (generally after power-up), the reporting of fault or other status information to part(s) of the system, calibration, temperature monitoring, the configuration of storage device(s) and/or storage subsystem(s) after power-up or during normal operation or for other purposes. Depending on the control bus characteristics, the control bus(es) might also provide a means by which the valid completion of operations could be reported by storage device(s) to the storage controller(s), or the identification of failures occurring during the execution of storage controller requests, etc.

[0064] As used herein, the term bus refers to one of the sets of conductors (e.g., signals, wires, traces, and printed circuit board traces or connections in an integrated circuit) connecting two or more functional units in a computing system. The data bus, address bus and control signals may also be referred to together as constituting a single bus. A bus may include a plurality of signal lines (or signals), each signal line having two or more connection points that form a main transmission line that electrically connects two or more transceivers, transmitters and/or receivers.

[0065] As used herein, a signal (or line, signal line, etc.) refers to one or more electrical conductors or optical carriers, generally configured as a single carrier or as two or more carriers, in a twisted, parallel, or concentric arrangement, used to transport at least one logical signal. A logical signal may be multiplexed with one or more other logical signals generally using a single physical signal but logical signal(s) may also be multiplexed using more than one physical signal.

[0066] As used herein, memory devices are generally defined as integrated circuits that are composed primarily of memory (e.g., storage, etc.) cells, such as DRAMs (Dynamic Random Access Memories), SRAMs (Static Random Access Memories), FeRAMs (Ferro-Electric RAMs), MRAMs (Magnetic Random Access Memories), Flash Memory (e.g., NAND flash, NOR flash, etc.) and other forms of random access and related memories that store information in the form of electrical, optical, magnetic, chemical, biological, combination(s) of these, and/or in other forms.

[0067] Dynamic memory device types may include FPM DRAMs (Fast Page Mode Dynamic Random Access Memories), EDO (Extended Data Out) DRAMs, BEDO (Burst EDO) DRAMs, SDR (Single Data Rate) Synchronous DRAMs, DDR (Double Data Rate) Synchronous DRAMs, DDR2, DDR3, DDR4, or any of the expected follow-on devices and related technologies such as Graphics RAMs, Video RAMs, LP RAM (Low Power DRAMs) which are often based on the fundamental functions, features and/or interfaces found on related DRAMs.

[0068] Flash memory device types may include: NAND, NOR, SLC, MLC, TLC using any interface (e.g., standard interface (e.g., ONFI, etc.); non-standard interface; etc.). Flash memory device types may also include any of the expected follow-on devices and related technologies.

[0069] Memory devices may include chips (die) and/or single or multi-chip or multi-die packages of various types, assemblies, forms, and configurations. In multi-chip packages, the memory devices may be packaged with other device types (e.g., other memory devices, logic chips, CPUs, hubs, buffers, intermediate devices, analog devices, programmable devices, etc.) and may also include passive devices (e.g., resistors, capacitors, inductors, etc.). These multi-chip packages may include cooling enhancements (e.g., an integrated heat sink, heat slug, fluids, gases, micromachined structures, micropipes, capillaries, etc.) that may be further attached to the carrier or another nearby carrier or other heat removal or cooling system. Other forms of packaging (e.g., assemblies, modules, cards, units, molding, encapsulation, etc.) for memory devices are also possible.

[0070] Although not necessarily shown in all the Figures, storage and memory support devices (e.g., storage controller(s), network controller(s), chipset(s), adapter(s), expander(s), buffer(s), buffer circuit(s), buffer chip(s), register(s), intermediate circuit(s), power supply regulator(s), VRMs, hub(s), re-driver(s), PLL(s), DLL(s), non-volatile memory, SRAM, DRAM, logic circuits, analog circuits, digital circuits, diodes, switches, LEDs, crystals, active components, passive components, combinations of these and other circuits, etc.) may be comprised of multiple separate chips (e.g., die, dies, dice, integrated circuits, etc.) and/or components, may be combined as multiple separate chips onto one or more substrates, may be combined into a single package (e.g., using die stacking, multi-chip packaging, etc.) or even integrated onto a single device based on tradeoffs such as: technology, power, space, weight, cost, etc.

[0071] One or more of the various passive devices (e.g., resistors, capacitors, inductors, combination(a) of these, etc.) may be integrated into the support chip packages, or into the substrate, board, PCB, or raw card itself, based on tradeoffs such as: technology, power, space, cost, weight, etc. These packages may include an integrated heat sink or other cooling enhancements (e.g., such as those described above, etc.) that may be further attached to the carrier or another nearby carrier or other heat removal or cooling system.

[0072] Memory and storage devices, intermediate devices and circuits, hubs, buffers, registers, clock devices, passives and other memory and storage support devices etc. and/or other components may be attached (e.g., coupled, connected, etc.) to the storage system(s) and/or subsystem(s) and/or other component(s) via various methods including solder interconnects, conductive adhesives, socket structures, pressure contacts, electrical/mechanical/optical and/or other methods that enable communication between two or more devices (e.g., via electrical, optical, wireless, combinations of these, or alternate means, etc.).

[0073] The one or more storage system(s) and/or subsystem(s) and/or other components/devices may be connected (e.g., electrically, optically, wireless, etc.) to the CPU complex, computer system or other system environment via one or more methods such as soldered interconnects, connectors, pressure contacts, conductive adhesives, optical interconnects (e.g., laser, LED, optic fiber, etc.), wireless links (e.g., coupling, coils, etc.) and/or other signal communication and/or power delivery methods. Physical connector systems may include mating connectors (male/female), conductive contacts and/or pins on one carrier mating with a male or female connector, optical connections, pressure contacts (often in conjunction with a retaining,

alignment, and/or closure mechanism) and/or one or more of various other communication and power delivery methods. The interconnection(s) may be disposed along one or more edges of an assembly (e.g., module, card, adapter, etc.) and/or placed a distance from the storage or other subsystem depending on such application requirements as ease of upgrade, ease of repair, cost, available space and/or volume, heat transfer constraints, component size and shape and other related physical, electrical, optical, visual/physical access, requirements and constraints, etc. Electrical interconnections on a card are often referred to as contacts, pins, connection pins, tabs, etc. Electrical interconnections on a connector are often referred to as contacts or pins.

[0074] The integrity, reliability, availability, serviceability, performance etc. of a communication path, data storage contents, and all functional operations associated with each element of a storage system or storage subsystem may be improved by using one or more fault detection and/or correction methods. Any or all of the various elements of a storage system or storage subsystem may include error detection and/or correction methods such as CRC (cyclic redundancy code, or cyclic redundancy check), ECC (error-correcting code), EDC (error detecting code, or error detection and correction), LDPC (low-density parity check), parity, checksum or other encoding/decoding methods suited for this purpose. Further reliability enhancements may include operation re-try (e.g., repeat, re-send, etc.) to overcome intermittent or other faults such as those associated with the transfer of information, the use of one or more alternate, stand-by, or replacement communication paths to replace failing paths and/or lines, complement and/or re-complement techniques or alternate methods used in computer, storage, communication, and related systems.

[0075] Additional functions that may reside local to the storage subsystem and/or storage system include write and/or read buffers, one or more levels of cache, protocol translation, error detection and/or correction circuitry, data scrubbing, local power management circuitry and/or reporting, operational and/or status registers, initialization circuitry, performance monitoring and/or control, and other functions.

[0076] Terminology

[0077] The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used herein, the singular forms (e.g., a, an, the, etc.) are intended to include the plural forms as well, unless the context clearly indicates otherwise.

[0078] The terms comprises and/or comprising, when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

[0079] In the following description and claims, the terms include and comprise, along with their derivatives, may be used, and are intended to be treated as synonyms for each other.

[0080] In the following description and claims, the terms coupled and connected may be used, along with their derivatives. It should be understood that these terms are not necessarily intended as synonyms for each other. For example, connected may be used to indicate that two or more elements are in direct physical or electrical contact with each other. Further, coupled may be used to indicate that that two or more elements

are in direct or indirect physical or electrical contact. For example, coupled may be used to indicate that that two or more elements are not in direct contact with each other, but the two or more elements still cooperate or interact with each other.

[0081] The corresponding structures, materials, acts, and equivalents of all means or step plus function elements in the claims below are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed. The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art without departing from the scope and spirit of the invention. The embodiment was chosen and described in order to best explain the principles of the invention and the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to the particular use contemplated.

[0082] As will be appreciated by one skilled in the art, aspects of the present invention may be embodied as a system, method or computer program product. Accordingly, aspects of the present invention may take the form of an entirely hardware embodiment, an entirely software embodiment (including firmware, resident software, micro-code, etc.) or an embodiment combining software and hardware aspects that may all generally be referred to herein as a circuit, component, module or system. Furthermore, aspects of the present invention may take the form of a computer program product embodied in one or more computer readable medium(s) having computer readable program code embodied thereon.

[0083] In this description a portable multifunction device (a *device*) is used as an example. It should be understood, however, that one or more of the embodiments described herein may be applied to any device (e.g., consumer device, phone, phone system, cell phone, internet phone, music player, video player, camera, social interaction device, radios, TV, watch, personal communication device, electronic wallet, smart jewelry, personal computer, tablet, laptop computer, computer, server, embedded system, electronic glasses, displays, projector, computer appliance, kitchen appliance, home control appliance, lighting control, network device, router, switch, TiVO, AppleTV, GoogleTV, set-top box, cable box, modem, cable modem, PC, tablet, media box, streaming device, entertainment center, GPS device, automobile system, ATM, toy, gaming system, camera, video camera, music device, storage device, back-up device, exercise machine, e-book reader, PDA, combinations of these, etc.).

[0084] The device may support one or more *applications* e.g., search applications contacts and/or friends applications, messaging applications, telephone applications, video conferencing applications, e-mail applications, communications applications, voice recognition applications, instant messaging (IM) applications, blog and/or blogging applications, photographic applications (e.g., catalog, management, upload, editing, etc.), shopping, payment, digital camera applications, digital video camera applications, web browsing and browser applications, digital music player applications, digital video player applications, cloud

applications, office productivity applications, backup and storage applications, other applications or combinations or multiple instances (e.g., versions, etc.) of these, etc.

[0085] Devices themselves may include (e.g., comprise, be capable of including, have features to include, have attachments, communicate with, etc.) one or more devices, e.g., as separate components, working in cooperation, as a collection of devices, as a multi-function device, with sockets or ports for extra devices and/or components, attached (e.g., direct attach, network attached, etc.) devices, upgrade components, expansion devices and/or modules, etc.

[0086] The device may have (e.g., execute, perform, capable of being programmed to perform, etc.) multiple functions (e.g., telephone, video conferencing, e-mail, instant messaging, blogging, digital photography, digital video, web browsing, digital music playing, social interaction, shopping, searching, combinations of these, etc.). Instructions for performing the device functions may be included in a computer readable storage medium or other computer program product configured for execution by one or more processors.

[0087] Language

[0088] The terminology and language used herein is for the purpose of describing particular embodiments only and is not intended to be limiting.

[0089] As used herein, the singular forms (e.g., a, an, the, one, etc.) are intended to include the plural forms as well, unless the context clearly indicates otherwise.

[0090] As used herein, the terms comprises and/or comprising, when used in this specification, specify the presence of stated features, numbers, integers, steps, operations, elements, and/or components, etc, but do not preclude the presence or addition of one or more other features, numbers, integers, steps, operations, elements, components, etc. and/or groups thereof.

[0091] In the following description and claims, the terms include and comprise, along with their derivatives, may be used, and are intended to be treated as synonyms for each other.

[0092] In the following description and claims, the terms coupled and connected may be used, along with their derivatives. It should be understood that these terms are not necessarily intended as synonyms for each other. For example, connected may be used to indicate that two or more elements are in direct physical or electrical contact with each other. Further, coupled may be used to indicate that that two or more elements are in direct or indirect physical or electrical contact. For example, coupled may be used to indicate that that two or more elements are not in direct contact with each other, but the two or more elements still cooperate or interact with each other.

[0093] The corresponding structures, materials, acts, and equivalents of all means or step plus function elements in the following claims are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed.

[0094] This description is presented for purposes of illustration and explanation, but is not intended to be exhaustive or limited to the invention in the forms disclosed. Modifications, permutations, combinations, and

variations of embodiments will be understood and apparent to those of ordinary skill in the art without departing from the scope and spirit of this description.

[0095] The embodiments chosen and described herein are presented in order to best explain the principles of the embodiments and their practical applications, and to enable others of ordinary skill in the art to understand the embodiments with various modifications as are suited to the particular use contemplated.

[0096] As will be understood and appreciated by one skilled in the art, one or more embodiments described herein may be a system, device, method, or computer program product, etc. Accordingly, one or more embodiments described herein may take the form of an entirely hardware embodiment, an entirely software embodiment (including firmware, resident software, micro-code, etc.) or an embodiment combining software and hardware aspects that may all generally be referred to herein as a circuit, component, module or system. Furthermore, one or more embodiments described herein may take the form of a computer program product embodied in one or more computer readable medium(s) having computer readable program code embodied thereon.

[0097] Figure 1 illustrates a network architecture 100, in accordance with one embodiment. As shown, a plurality of networks 102 is provided. In the context of the present network architecture 100, the networks 102 may each take any form including, but not limited to a local area network (LAN), a wireless network, a wide area network (WAN) such as the Internet, peer-to-peer network, etc.

[0098] Coupled to the networks 102 are servers 104 which are capable of communicating over the networks 102. Also coupled to the networks 102 and the servers 104 is a plurality of clients 106. Such servers 104 and/or clients 106 may each include a desktop computer, lap-top computer, hand-held computer, mobile phone, personal digital assistant (PDA), tablet computer, peripheral (e.g., printer, etc.), any component of a computer, and/or any other type of logic. In order to facilitate communication among the networks 102, at least one gateway 108 is optionally coupled therebetween.

[0099] Figure 2 shows a representative hardware environment that may be associated with the servers 104 and/or clients 106 of Figure 1, in accordance with one embodiment. Such figure illustrates a typical hardware configuration of a mobile device in accordance with one embodiment having a central processing unit 210, such as a microprocessor, and a number of other units interconnected via a system bus 212.

[00100] The mobile device shown in Figure 2 includes a Random Access Memory (RAM) 214, Read Only Memory (ROM) 216, an I/O adapter 218 for connecting peripheral devices such as disk storage units 220 to the bus 212, a user interface adapter 222 for connecting a keyboard 224, a mouse 226, a speaker 228, a microphone 232, and/or other user interface devices such as a touch screen (not shown) to the bus 212, communication adapter 234 for connecting the mobile device to a communication network 235 (e.g., a data processing network) and a display adapter 236 for connecting the bus 212 to a display device 238.

[00101] The mobile device may have resident thereon any desired operating system. It will be appreciated that an embodiment may also be implemented on platforms and operating systems other than those mentioned. One embodiment may be written using JAVA, C, Objective C, and/or C++ language, or

other programming languages, along with an object oriented programming methodology. Object oriented programming (OOP) has become increasingly used to develop complex applications.

[00102] Of course, the various embodiments set forth herein may be implemented utilizing hardware, software, or any desired combination thereof. For that matter, any type of logic may be utilized which is capable of implementing the various functionality set forth herein.

[00103] Figure 3 shows a method 300, in accordance with one embodiment. As an option, the method may be implemented in the context of the architecture and environment of any subsequent Figure(s). Of course, however, the method may be implemented in any desired environment.

[00104] As shown in operation 302, a signal is received in association with a touch interface of a device. In one embodiment, the signal may include a pressure signal which is indicative of a magnitude of pressure. In the context of the present description, such pressure signal may include any signal that is a function of or related to a pressure applied to the device. In one embodiment, such pressure signal may be indicative of a magnitude of pressure being applied to a touch interface of the device. In various embodiments, such pressure signal may be generated by a pressure sensor including, but not limited to those described in the context of subsequently described embodiments, or any other mechanism, for that matter, that is capable of generating the pressure signal.

[00105] In other embodiments, the signal may include a touch signal indicative of a touch interface being touched. In the context of the present description, such touch signal may or may not be indicative of a magnitude of pressure being applied to a touch interface of the device. For example, such touch signal may, in one embodiment, simply indicate whether applied pressure is sensed, or not, e.g., not necessarily gauge any more than two pressure states, including pressure-sensed and pressure-not-sensed, etc.

[00106] Also in the context of the present description, the aforementioned device may include any device including, but not limited to those described in the context of this and/or subsequently described embodiments. Further, in various embodiments, the touch interface may or may not be combined with a display. For example, if the touch interface is combined with a display, the touch interface may include a touch screen. Thus, the touch interface may, in various embodiments, include, but is not limited to a touch screen or any other interface responsive to touch that is described in the context of this and/or subsequently described embodiments.

[00107] In one optional embodiment, the touch interface may be positioned on a first face of a device that includes a display on a second face thereof. Further, the first face and second face may include any respective faces (e.g., front, back, left side, right side, top side, bottom side, etc.) that are different. Just by way of example, in various embodiments, the first face and the second face may be on opposite faces of the device of the device. Further, the first face may include a side face and the second face may include a front face of the device. Even still, the first face may include a back face and the second face may include a front face of the device. Of course, the touch interface may be positioned on the same face as the display, in other embodiments.

[00108] As indicated in operation 304, a user experience may be altered, utilizing the signal. In the context of the present description, the user experience may include any aspect of the device that is capable of being directly or indirectly experienced by a user including, but not limited to those described in the context of this and/or subsequently described embodiments.

[00109] For example, in the context of an embodiment involving the pressure signal, the user experience may be altered as a function of the magnitude of the pressure being applied to the touch interface, utilizing the pressure signal. Just by way of example, in various embodiments, the user experience may be altered by causing input to the device, by causing output from the device, by causing processing by the device, etc. In other embodiments involving a touch signal, the user experience may be altered in any manner, utilizing the touch signal (dependent or independent of any fluctuation of pressure).

[00110] Of course, the foregoing embodiments may be altered by adding and/or removing various features. For example, in one embodiment, the pressure signal may be received which is indicative of the magnitude of pressure being applied to a touch interface positioned on a first face of a device that includes a display on a second face thereof. To this end, the user experience may be altered as a function of the magnitude of the pressure being applied to the touch interface, utilizing the pressure signal.

[00111] In another embodiment, a pressure signal may be received which is indicative of a magnitude of pressure being applied to a touch screen. To this end, the user experience may be altered as a function of the magnitude of the pressure being applied to the touch screen, utilizing the pressure signal. In still yet another optional embodiment, a touch signal may be received which is indicative of a touch interface being touched, where the touch interface is positioned on a first face of a device that includes a display on a second face thereof. To this end, the user experience may be altered, utilizing the touch signal. Again, any of the features described above (or hereinafter, for that matter) may or may not be combined in any desired manner.

[00112] More illustrative information will now be set forth regarding various optional architectures and features with which the foregoing techniques discussed in the context of any of the present or previous figure(s) may or may not be implemented, per the desires of the user. For instance, various optional examples and/or options associated with the operations 302 and/or 304, and/or other optional features have been and will be set forth in the context of a variety of possible embodiments. It should be strongly noted, however, that such information is set forth for illustrative purposes and should not be construed as limiting in any manner. Any of such features may be optionally incorporated with or without the inclusion of other features described.

[00113] Figure 4 shows a method 400 for defining a selection made within a user interface based in part on contact pressure, in accordance with one embodiment. As an option, the method 400 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the method 400 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00114] As shown, it is determined whether sufficient initial contact pressure is being exerted on an interaction surface. See determination 402.

[00115] In the context of the present description, an interaction surface refers to a surface through which a user may interact with a device. It may take up the majority of a device face, or just a subset. In various embodiments, an interaction surface may be sensitive to one or more types of interaction, including but not limited to, contact, pressure, and/or proximity. In one embodiment, an interaction surface is receptive to multitouch input. In another embodiment, an interaction surface may be non-planar. In yet another embodiment, an interaction surface may be transparent, and combined with a display. In still another embodiment, an interaction surface may be replaceable. Some embodiments of an interaction surface may have more than one texture, to provide tactile guides to a user when used on the back face of a device. Other embodiments of an interaction surface are non-rectangular.

[00116] In various embodiments, an interaction surface may utilize one or more forms of technology to sense contact. These contact-sensing technologies may include, but are not limited to, capacitive, resistive, optical, surface acoustic wave based, and/or any other contact sensing technologies now known or later developed.

[00117] In various embodiments, an interaction surface may utilize one or more forms of technology to sense proximity. These proximity-sensing technologies may include, but are not limited to, capacitive, resistive, eddy current, optical, ultrasonic, heat, electric field based, and/or any other contact sensing technologies now known or later developed.

[00118] In various embodiments, an interaction surface may utilize one or more forms of technology to sense pressure. These pressure-sensing technologies may include, but are not limited to, conductive, resistive, piezoelectric, and/or any other pressure sensing technologies now known or later developed. In some embodiments, an interaction surface may be able to only detect the total pressure being exerted on the surface. In other embodiments, an interaction surface may be able to discern the contact pressures associated with one or more points or areas of contact.

[00119] In the context of the present description, contact pressure is the pressure associated with one or more contact points or contact areas, the pressure being exerted on an interaction surface. For example, in one embodiment, contact pressure may be the pressure exerted on an interaction surface by a single finger press.

[00120] In the context of the present description, a contact area refers to the area of an interaction surface which is in physical contact with an implement of interaction. In various embodiments, the contact area may be described, stored, and processed, as a collection of cells that are part of an array. In one embodiment, this array may directly correspond to pixels of a display. In another embodiment, the array may correspond to a grid of discrete areas on an interaction surface which sense contact, pressure, or both. In still another embodiment, the contact area is represented as a primitive shape (e.g., circle, square, etc.) which best fits the actual area in contact with an implement of interaction.

[00121] In the context of the present description, an implement of interaction refers to an object which is detectable by an interaction surface in one or more ways (e.g., proximity, contact, pressure, etc.). In various embodiments, implements of interaction may include, but are not limited to, fingers, skin, a stylus, and/or any other object with which a user may interact with a device.

[00122] In the context of the present description, a contact point refers to a single location on an interaction surface which is associated with physical contact with an implement of interaction. In various embodiments, the contact point may be determined from a contact area. For example, in one embodiment, a contact point may be located in the center of its associated contact area. In another embodiment, a contact point may be located on an edge of its associated contact area.

[00123] Determining whether sufficient initial contact pressure is being exerted on an interaction surface depends on a threshold contact pressure. In some embodiments, the smallest degree of contact pressure may be sufficient, such that the definition of a selection may be triggered by any contact. In other embodiments, the definition of a selection does not occur until a non-negligible threshold contact pressure has been detected. In one embodiment, this threshold contact pressure may be defined by the user. In this way, accidental definitions of a selection may be avoided.

[00124] In some embodiments, determination 402 may be performed only after certain events have occurred. For example, in one embodiment, the determination may be made only after receipt of an input or combination of inputs. Possible inputs include, but are not limited to, object proximity to the interaction surface, activation of a hardware switch or button, activation of a software switch or button, and/or any other input capable of being detected. In one embodiment, the determination may not be made until the host device is woken from a sleep state. In another embodiment, the determination itself may also wake the host device from a sleep state.

[00125] If the result of determination 402 is that there is sufficient initial contact pressure being exerted on an interaction surface, the current contact pressure level is determined. See operation 404.

[00126] In the context of the present description, a contact pressure level is the pressure reading generated from the raw data received from a touch sensor. In various embodiments, the contact pressure level may be represented by a number. For example, in some embodiments, the contact pressure level may be represented by an integer. In another embodiment, the contact pressure level may be represented by a floating-point number. In various embodiments, the contact pressure level may be represented by a percentage of the measurable range of contact pressures. In one embodiment, the contact pressure level may be represented by a unit less number. In another embodiment, the contact pressure level may be represented by an actual measure of the contact pressure, associated with a unit of pressure.

[00127] In various embodiments, the contact pressure level may be represented by a touch state. In the context of the present description, a touch state refers to a predefined subset of the range of measurable contact pressures. For example, in one embodiment, contact pressure levels may be represented as one of four predefined touch states: no touch, light touch, medium touch, and heavy touch. As an option, the lowest

touch state may require some form of proximity. In some embodiments, the user may be able to specify how the measurable range of contact pressures is partitioned across a predefined number of touch states. In one embodiment, the number and boundaries of touch states may be defined system-wide, for all applications. In another embodiment, the number and boundaries of touch states may be defined on a per-application basis.

[00128] As shown, the selection area is calculated. See operation 406. In the context of the present description, the selection area refers to a region of the display, or a region of an object pictured on the display, which has been chosen for selection. The calculation of the selection area may be based upon one or more factors, including, but not limited to, a contact pressure level, a touch state, a contact area, a contact point, a selection boundary, a selection boundary geometry, and/or any other information derived from user interaction. In some embodiments, the selection area may be described as the pixels contained within a selection boundary.

[00129] In the context of the present description, a selection boundary describes the boundary of an associated selection area, and is based upon a selection boundary geometry. Additionally, in the context of the present description, a selection boundary geometry refers to the shape of a selection boundary. In some embodiments, a selection boundary geometry may not have reference to actual size or location. For example, in one embodiment, a selection boundary geometry may be described using fractional coordinates on a unit square.

[00130] In various embodiments, a selection area may be described, stored, and/or processed as the area contained within a selection boundary. A selection boundary may be represented by a selection boundary geometry, a screen location, and one or more transformations, such as scale or orientation. In one embodiment, the screen location is the point on which the transformed selection boundary geometry is centered.

[00131] In some embodiments, the selection area may be described, stored, and/or processed, as a collection of cells that are part of an array. In one embodiment, this array may directly correspond to pixels of a display. In another embodiment, the array may correspond to a grid based on a coordinate system specific to an object being displayed. In still another embodiment, the selection area may be described, stored, and processed as a mathematical function that defines the boundary of the selection area.

[00132] In one embodiment, the shape of a selection boundary may be one of a plurality of selection boundary geometries predefined within an operating system. In another embodiment, the shape of a selection boundary may be predefined within an application, independent of selection boundary geometries defined within the operating system. In yet another embodiment, the selection boundary geometry may be specified by a user. In still another embodiment, the geometry of the selection boundary may depend upon at least one form of user input, including but not limited to contact pressure, number of fingers in contact with the screen, device orientation, location of user fingers, and/or any other form of user input. Finally, in another embodiment, the geometry of a selection boundary may depend upon the content within or near a location

associated with the selection (e.g., contact point, finger location, focal point of user's eyes, cursor location, etc.).

[00133] In some embodiments, selection boundaries may have geometries based upon simple shapes, including, but not limited to, ovals, circles, triangles, squares, rectangles, and/or higher order polygons. In other embodiments, selection boundaries may be based upon regular shapes (e.g., a star, a plus sign, etc.). In one embodiment, a selection boundary may be based upon the geometry of a contact area.

[00134] There are numerous ways in which a selection boundary may be described, stored, and/or processed. In various embodiments, a selection boundary may be represented by the combination of an established selection boundary geometry with a location, a scale, and/or a rotation.

[00135] In one embodiment, a selection boundary may be described using the vertex coordinates of a selection boundary geometry, in conjunction with location, scale, and/or rotation factors. For example, a rectangular selection boundary geometry may be described by the coordinates of the four corners. As an option, the vertices of a selection boundary geometry may be described using coordinates within the unit square.

[00136] In another embodiment, a selection boundary may be described using a mathematical function representing an established selection boundary geometry, in conjunction with location, scale, and/or rotation factors. For example, an elliptical selection boundary geometry may be described by an ellipse function whose foci depend upon the scale factor.

[00137] In yet another embodiment, a selection boundary may be described using a spline-based representation of a selection boundary geometry, in conjunction with location, scale, and/or rotation factors. For example, a curled selection boundary geometry may be described using splines combined with location, scale, and rotation factors.

[00138] In other embodiments, a selection boundary may be described by a bitmap representation of a selection boundary geometry, in conjunction with location, scale, and/or rotation factors. For example, in one embodiment, a bitmap representation of a contact area may be used as a selection boundary geometry associated with a selection boundary. In another embodiment, a bitmap representation of an irregular shape may be used as a selection boundary geometry associated with a selection boundary. In this way, geometries which may be difficult to describe using vertices, formulas, or splines may be used as the bases for a selection boundary.

[00139] The selection area is calculated by determining the selection boundary. In various embodiments, the selection boundary may be determined by transforming an appropriate selection boundary geometry as a function of user input, including but not limited to, contact pressure level, contact point, contact area, number of fingers detected, device orientation, etc. Once the selection boundary has been determined, the selection area is known.

[00140] In various embodiments, the selection boundary may be defined by transforming the scale of an appropriate selection boundary geometry as a function of user input. For example, in one embodiment, a

selection boundary with a circular geometry may have a larger radius at higher contact pressure levels. In another embodiment, a rectangular selection boundary geometry may be scaled linearly by a factor proportional to the contact pressure level. In some embodiments, the relationship between selection boundary geometry scale and a contact pressure level is proportional. In other embodiments, the relationship between selection boundary geometry scale and a contact pressure level is inversely proportional, such that higher pressure may make the geometry smaller.

[00141] In various embodiments, the selection boundary may be defined by transforming the orientation of an appropriate selection boundary geometry as a function of user input. For example, in one embodiment, a selection boundary with a star-shaped geometry may be rotated further clockwise at higher contact pressure levels. In some embodiments, the relationship between selection boundary geometry orientation and a contact pressure level is proportional, such that an increase in pressure may result in a clockwise rotation. In other embodiments, the relationship between selection boundary geometry orientation and a contact pressure level is inversely proportional, such that higher pressure may cause a counterclockwise rotation.

[00142] In some embodiments, a selection boundary may have an anchor point. In the context of the present description, an anchor point refers to a point located on or near the selection boundary geometry which remains fixed as the geometry is transformed. In one embodiment, a selection boundary may have a scaling anchor point, which remains fixed as the geometry is scaled. For example, a square selection boundary may have a scaling anchor point in the upper left corner, causing the square to expand down and to the right, keeping the upper left corner stationary.

[00143] In another embodiment, a selection boundary may have a rotational anchor point, which is used as an axis of rotation as the selection boundary geometry is rotated. For example, a star-shaped selection boundary may have a rotational anchor point located in the center, such that it rotates along an axis of symmetry.

[00144] In various embodiments, the calculation of the selection area may depend upon the context of the selection. Specifically, the selection boundary may be dependent upon the type of content on or near a point or area associated with the selection, including but not limited to, a contact point, a contact area, a cursor, a user focus, etc. In various embodiments, the selection boundary geometry and the manner in which it transforms as a function of user input may be context dependent. For example, in one embodiment, a selection made on or near a text field may cause the selection boundary geometry to be rectangular, with a scaling anchor point located in an upper corner appropriate for the text language (e.g., upper left corner for English, upper right corner for Arabic, etc.). In another embodiment, a selection on or near a text field may cause the rectangular boundary geometry to scale in increments of the same scale as the height and width of the text. In this way, it may be clear to the user which text has been selected, as there may never exist a selection boundary which contains only half a line or character.

[00145] In another embodiment, a selection on or near a text field may result in a rectangular selection boundary geometry which scales proportionally to a contact pressure level in a manner similar to how text is

selected using a cursor. In this way, a user may select text in a familiar manner, while only having to vary the pressure being exerted on a contact point, for example. In one embodiment, the text selection begins to increase once a predefined contact pressure level has been achieved. As an option, the rate at which the selection grows may be a function of the contact pressure level, once the predefined contact pressure level has been achieved and the selection grown initiated. In another embodiment, the text selection scaling may be tiered, such that at one touch state, the selection grows character by character, at an intermediate touch state the selection grows word by word, and so on, such that the user is able to enlarge the text selection in increments of characters, words, lines, paragraphs, and pages, depending on the touch state. As an option, the selection may also be incremented by sentences.

[00146] In other embodiments, the above-mentioned methods for selecting text using a selection which expands in the direction the text would be read in may also be applied to the selection of other linear subject matter. For example, in one embodiment, this method may be used to select a video segment. As an option, the selection scaling may be tiered, growing from frame-by-frame to second-by-second to minute-by-minute, and so on. In another embodiment, this method may be used in the selection of a portion of chronologically arranged material. Possible material with a temporal arrangement may include, but is not limited to, a collection of photos, messages in an email account, text messages, web browser history, and/or any other collection of items which may be arranged chronologically.

[00147] In various embodiments, a selection made within a graphic (e.g., photograph, drawing, movie still, bitmapped or rasterized text, etc.) may utilize a default selection boundary geometry with a default scaling anchor point. In one embodiment, the user may be able to predefine the default selection boundary geometry and/or default scaling anchor point, to be used when making a selection within a graphic. In still another embodiment, the default selection boundary geometry and/or default scaling anchor point may be predefined within the operating system. As an option, these defaults may be predefined on a per-application basis.

[00148] In various embodiments, a selection made within a photograph may result in the use of a context-specific selection boundary geometry which transforms in a context specific manner. For example, in one embodiment, a selection made within a photograph containing one or more people may utilize the rough shape of the subjects' faces as a selection boundary geometry. As an option, the selection boundary geometry may be composed of the perimeter of all faces within a certain distance of a point related to the selection (e.g., contact point, user focus, etc.), the distance being proportional to a user input (e.g., contact pressure level, touch state, etc.). Face selection may be used to assist the user in establishing the identity of photographed individuals, allowing future identification to be performed automatically using facial recognition. In one embodiment, facial and other forms of recognition may be performed by a host device, a remote computer, a cloud service, or any other computational resource, or combination of these and other resources.

[00149] In another embodiment, a selection made within a photograph on or near an eye may utilize a rough shape of the eye as a selection boundary geometry. As an option, the exactness of the method used to

automatically detect the shape of an eye may vary as a function of a user input, such as contact pressure level. Eye selection may be used to assist the user in removing the "red eye" effect sometimes seen in photographs.

[00150] In one embodiment, a selection made within a graphic may cause the selection boundary geometry to be defined by the collection of pixels near a point associated with the selection (e.g., contact point, user focus, etc.) which are similar in at least one aspect. Possible aspects include, but are not limited to, color, one or more dimensions of an associated color space, brightness, transparency, and/or any other aspect that may be associated with a pixel. As an option, the degree of similarity between pixels required to influence the selection boundary geometry may be a function of a user input, such as a contact pressure level. In this way, a user may be assisted in separating an object within the graphic from a background or other visual elements.

[00151] In various embodiments, there may exist limits to the amount a selection boundary geometry may be transformed as a function of user input. For example, in one embodiment, the selection boundary geometry may increase in size as the contact pressure level increases, until an upper contact pressure threshold is reached. Contact pressure levels beyond the upper threshold may not increase the size of the selection boundary geometry any further. In another embodiment, the scale of the selection boundary geometry may be limited by a lower contact pressure threshold, such that reducing the contact pressure level below the threshold may not reduce the scale of the selection boundary geometry any further. In yet another embodiment, both upper and lower contact pressure thresholds may be implemented. In other embodiments, this concept of thresholds may be applied to other variable aspects of the selection boundary, such as the orientation of the selection boundary geometry, and as a function of other user input, including but not limited to the location of a contact point, the size of a contact area, user focus, and/or any other type of user input.

[00152] In one embodiment, the user may be able to predefine one or more contact pressure thresholds associated with the limits of a transformation of the selection boundary geometry. As an option, the user may also predefine the limits of the transformation, in addition to the maximum and/or minimum contact pressure level which may affect said transformation. In another embodiment, these contact pressure thresholds and/or transformation limits may be predefined within the operating system. In still another embodiment, the contact pressure thresholds may be automatically optimized over time, by observing the typical range of pressures the user exerts in various use scenarios.

[00153] In one embodiment, the selection boundary geometry and/or transformation of the selection boundary geometry may depend upon the proximity of an object to an interaction surface, rather than an aspect of physical contact with an interaction surface.

[00154] In various embodiments, the selection boundary may depend, at least in part, upon the user focus. In the context of the present description, user focus refers to a point or area on a display which is the visual and/or interactive focus of the user. For example, in one embodiment, the user focus may be determined by tracking the eyes of a user with one or more device-mounted cameras, and calculating where the user is looking. This may also be referred to as user gaze, or user gaze tracking. As an option, eye movement may

also be monitored, to ascertain the manner in which the user is using the device (e.g., methodically reading text, quickly scanning text, examining a picture, visually searching for an icon, etc.). In another embodiment, the user focus may be defined as the location of a cursor in a text environment. In still another embodiment, the user focus may be established through user input, such as a finger tap.

[00155] Various aspects of the selection boundary may depend upon the user focus. For example, in one embodiment, the user focus may be used to determine the context of a selection. In another embodiment, the user focus may be used to determine the location of a selection, allowing the user to make a selection without having to change the location of a contact point. In still another embodiment, the tracking of eye movement may be used to determine the type of selection (e.g., reading eye movement may trigger a text selection, etc.).

[00156] Once the selection boundary has been determined using an appropriate selection boundary geometry that has been transformed as a function of a user input, the selection area may be calculated.

[00157] As shown, the selection area is displayed. See operation 408. In various embodiments, a selection area may be displayed using one or more selection functions. In the context of the present description, a selection function refers to a function of one or more inputs which determines one or more properties of a selection. For example, in one embodiment, possible selection function inputs may include, but are not limited to, touch state, contact pressure level, selection state, finger locations, device orientation, user focus, pressure uncertainty, touch uncertainty, contact point, contact area, gestures, application type and/or context, application flags, operating system flags, and/or any other form of user or system input.

[00158] Within the context of the present description, pressure uncertainty refers to any data associated with the uncertainty inherent in measuring pressure exerted on an interaction surface. Pressure uncertainty may include, but is not limited to, the uncertainty of a measured contact pressure level, a multidimensional array of values representing the variance of contact pressure measured for each cell/pixel in the vicinity of a contact point, an uncertainty value inherent to a particular pressure sensor, and/or any other type of data associated with uncertainty in pressure measurement.

[00159] Within the context of the present description, touch uncertainty refers to any data associated with the uncertainty inherent in sensing contact with an interaction surface. Touch uncertainty may include, but is not limited to, the error range associated with the location of a contact point, a multidimensional array of values representing the probabilities of contact measured for each cell/pixel in the vicinity of a contact point, an uncertainty value inherent to a particular touch sensor, and/or any other type of data associated with uncertainty in sensing contact.

[00160] Within the context of the present description, a selection state refers to whether a selection is ‘dynamic’ and still able to vary as a function of user input, or ‘static’, and not currently varying as a function of user input.

[00161] In various embodiments, a selection function may determine one or more presentation properties of a selection. For example, possible presentation properties may include, but are not limited to, shading, color, contrast, brightness, line style, animation routine, transparency, pattern, border style, area style, and/or

any other visual property that may describe an object on a display. Examples of animation routines include, but are not limited to, "marching ants", changing colors, flashing, simulated optical distortions, pulsing highlights, and/or any other routine which varies location, transparency, color, content, and/or any other graphical property over time. In some embodiments, an animation routine may be a function of user input.

[00162] In various embodiments, a selection function may vary one or more presentation properties as a function of contact pressure. In this way, the user has visual feedback as to the level of pressure they are exerting on the device. For example, in one embodiment, the selection function may indicate the contact pressure level by shading the selection with a color which is somewhere between a pair of colors which represent the extrema of measurable contact pressure levels.

[00163] In various embodiments, a selection function may determine one or more fundamental properties of a selection. Within the context of this description, fundamental selection properties may include, but are not limited to, selection boundary geometry, transformation(s) to be applied to the selection boundary geometry as a function of user input, anchor point(s), and/or any other property which may be associated with a selection area.

[00164] In various embodiments, the application of a selection function may display a secondary boundary. Within the context of this description, a secondary boundary is any boundary, radius, or area associated with a selection area, which is not the selection boundary. For example, in one embodiment, a secondary boundary may be the area within which facial detection is being performed, as opposed to the selection boundary, which may be the outline of detected faces. In another embodiment, a secondary boundary may be the area within which eye detection is being performed. In yet another embodiment, the secondary boundary may represent the pressure uncertainty or touch uncertainty associated with a contact area.

[00165] In various embodiments, the secondary boundary may be displayed in addition to, or instead of, the selection boundary. For example, in one embodiment where face detection is being performed as part of calculating the selection area, the selection boundary may be indicated with a solid color line while the secondary boundary may be indicated with a thin dotted line.

[00166] In various embodiments, the area unique to the secondary boundary (i.e. the portion of the enclosed area which does not overlap with the selection area) may have presentation properties that differ from the selection area. For example, in one embodiment, a user may make a text selection of which the intended boundaries are uncertain. The portion of the text which was almost certainly intended to be selected may be shaded in green, while the text which may or may not have been selected intentionally may be shaded in red. The user intention may be extrapolated from uncertainty associated with the contact and/or contact pressure used to make the selection, in accordance with one embodiment.

[00167] In various embodiments, the secondary boundary may be used to indicate uncertainty associated with a form of machine recognition including, but not limited to, facial recognition, OCR, and/or any other form of machine recognition. For example, faces within a selection which have been recognized with a

threshold degree of confidence may be outlined in green, while faces whose recognition is suspect (i.e. multiple viable matches, etc.) may be outlined in red (i.e. a secondary border).

[00168] As shown, after the selection area has been displayed, it is determined whether the selection establishment conditions have been met. See determination 410.

[00169] Within the context of the present description, selection establishment conditions refer to one or more predefined conditions whose satisfaction may cause the selection state to switch from 'dynamic' to 'static'. For example, in one embodiment, once the selection establishment conditions have been satisfied, the selection may no longer vary with contact pressure levels until determination 402 once again detects sufficient initial contact pressure. In various embodiments, the selection establishment conditions may be defined within a selection function.

[00170] In various embodiments, one or more selection establishment conditions may depend upon changes in the contact pressure level. For example, in some embodiments, selection establishment may be conditioned upon whether the contact pressure level drops below a predefined level. In one embodiment, this threshold contact pressure level may be defined as being a set amount of pressure less than the current contact pressure level. In this way, a user may reduce the contact pressure a small amount to modify their selection, with further reduction causing a selection establishment condition to be satisfied. In another embodiment, the threshold contact pressure level may be a set pressure amount.

[00171] In various embodiments, a selection establishment condition may depend upon contact pressure velocity, or the rate at which the contact pressure level is changing. For example, in one embodiment, a user may be able to satisfy a selection establishment condition by quickly reducing the contact pressure level to a predefined level within a predefined amount of time. In another embodiment, selection establishment may be conditioned upon whether a user has increased the contact pressure level to a predefined level within a predefined amount of time. In yet another embodiment, a selection may be established by exceeding a predefined contact pressure velocity, without regard to the actual pressure levels. As a specific example, a user may establish their selection by a quick pulse of their finger, without having to reach a particular pressure level.

[00172] In various embodiments, a selection establishment condition may depend upon how much time has elapsed since a particular event. For example, in one embodiment, a selection may be established if the user maintains a contact pressure level for a predefined amount of time. As an option, there may be a predefine tolerance level for pressure variations which may not reset this timing, allowing for small fluctuations in contact pressure which may be difficult for a user to control. In another embodiment, a selection establishment condition may be satisfied once a predefined amount of time has elapsed since the satisfaction of determination 402.

[00173] In various embodiments, a selection establishment condition may depend upon forms of user input that are not related to contact pressure. These forms of user input may include, but are not limited to, gestures, a change in the number of fingers in contact with the device, change in device orientation,

surpassing a threshold level of accelerations (e.g., wrist flick, etc.), and/or any other form of user input. It should be noted that selection establishment may also be conditioned upon the satisfaction of a combination of any of the previously described conditions.

[00174] If it is determined that the selection establishment conditions have not been met, the selection is updated in a loop through performing operations 404, 406, and 408. The selection may continue to vary as a function of user input until the selection establishment conditions have been met.

[00175] If it is determined that the selection establishment conditions have been met, the selection state is changed from 'dynamic' to 'static'. See operation 412.

[00176] Setting the selection state to 'static' means the selection is no longer being modified by user input. In various embodiments, the selection function may depend in part on the selection state. For example, in one embodiment, when the selection state is 'static', the secondary boundary may be removed from the display. In another embodiment, a 'static' selection state may cause the selection area to be displayed in a different color, or with a different style of selection boundary. In yet another embodiment, changing a selection state from 'dynamic' to 'static' may cause one or more application and/or operating system flags to be set.

[00177] In various embodiments, changing a selection state from 'dynamic' to 'static' may prompt the user to choose an action to be performed on or with the contents of the selection. For example, in one embodiment, after the desired faces have been highlighted and the user has reduced the contact pressure level below the dynamic selection minimum threshold pressure, they may be prompted to confirm the identity of the selected faces. In another embodiment, after a text selection has been given a 'static' selection state, the user may be prompted with operations that may be performed on the selected text, including but not limited to copy, cut, paste, spell check, style (e.g., bold, underlined, italic, etc.), font, font size, and/or any other operation which may be performed on text.

[00178] In some embodiments, once a selection has become 'static', it can no longer be modified and may be destroyed upon creation of a new selection. In other embodiments, a user may further modify a static selection by first applying a contact pressure sufficient to satisfy determination 402. In one embodiment, satisfying determination 402 with a static selection already in existence may change the selection state of the previous selection from static to dynamic, allowing further variation as a function of user input. In another embodiment, satisfying determination 402 with a static selection already in existence may create a new selection, as a function of user input, which is combined with the previously made selection. In yet another embodiment, a user may chose whether to replace a previously made selection or augment (i.e. add to, subtract from, etc.) a previously made selection with a new selection. As an option, the user choice may be indicated through gesture, voice command, toggling a hardware control, toggling a software control, and/or any other form of user input.

[00179] In various embodiments, method 400 may be adapted to allow for the definition, establishment, and modification of selections through other types of user input. Other types of user input may include, but

are not limited to, proximity to an interaction surface, number of contact points, gestures, and/or any other form of user input. For example, in one embodiment, a user may expand a text selection by bringing their finger into proximity to the interaction surface.

[00180] Figure 5 shows a pressure sensitive user interface 500 for making a selection, in accordance with one embodiment. As an option, the user interface 500 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 500 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00181] As shown, the user interface 500 may be utilized in making a selection based in part on pressure exerted by the user upon one or more interaction surfaces located on a device. For example, in one embodiment, a user's finger 502 may exert a small amount of force over contact area 504, which is centered on contact point 506 located on a pressure sensitive touch screen. If the contact pressure level is sufficient, then a selection area 508 having a selection boundary 510 is calculated and displayed. As the contact pressure is increased, the selection boundary expands to encompass a larger selection area 512.

[00182] Figure 6 shows a method 600 for determining the context of a contact pressure-based selection and choosing an appropriate selection function, in accordance with one embodiment. As an option, the method 600 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the method 600 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00183] As shown, the context determination zone is defined. See operation 602. Within the context of the present description, a context determination zone refers to the area that is examined while determining the context of a selection. In various embodiments, the context determination zone may be initially defined as a function of one or more elements of user input upon which the selection itself is based. For example, in one embodiment, the context determination zone may be initially defined to be the contact area. In another embodiment, the context determination zone may be a predefined shape (e.g., circle, square, etc.) of predefined size, centered on the contact point. As an option, the user may be able to specify the initial size and shape of the context determination zone. In yet another embodiment, the context determination zone may be located such that the contact point is off-center, to provide a more intuitive user experience (e.g., the zone may be offset to compensate for the user's view being obstructed by their finger, etc.).

[00184] In still another embodiment, the context determination zone may have a predefined size. As an option, the predefined initial size for a context determination zone may be chosen such that it is smaller than any user interface elements which may be detected. As an additional option, the predefined initial size may be chosen such that it is large enough to assist a user in distinguishing between potential selection targets which are close to each other.

[00185] As shown, once the context determination zone has been defined, it is then determined whether there is a user interface control widget within the context determination zone. See determination 604.

[00186] Within the context of the present description, a user interface control widget refers to any element within a user interface which may receive user input, which are typically non-textual. For example, in various embodiments, user interface control widgets may include, but are not limited to, buttons, radio boxes, check boxes, drop down lists, sliders, tabs, and/or any other non-textual UI widget.

[00187] In some embodiments, user interface control widgets may also include hyperlinks which are isolated from a text field. For example, text that responds to user interaction like a button, but is not located within a selectable text field. Selectable text fields and hyperlinks embedded within a text field (e.g., links within a web page, links within a word processing document, etc.) are specifically excluded from this definition of user interface control widgets, as they are treated as separate cases within this method.

[00188] In various embodiments, the determination as to whether there is a user interface control widget within the context determination zone begins with determining whether there is a UI control widget located at the contact point upon which the zone is based. In this way, time is not wasted determining the context of a well-aimed contact point.

[00189] If a UI control widget is not located at the contact point, then it may be determined if there is a UI control widget in the vicinity, within the context determination zone. In various embodiments, this determination may be performed using the bounding boxes associated with user interface elements. Within the context of the present description, a bounding box refers to a rectangle within which a user interface control widget may reside. In some embodiments, a bounding box may be the smallest rectangle which may contain a particular user interface control widget. In this way, detection of user interface control widgets whose shape is not rectangular is simplified.

[00190] For example, in one embodiment, the determination as to whether there is a user interface control widget within the context determination zone may be performed by determining if the boundary of the context determination zone intersects with the bounding box of any user interface control widgets. As an option, if the initial size of the context determination zone is larger than a predefined minimum (e.g., smallest bounding box associated with a typical UI control widget, smallest bounding box present within the present UI, etc.), the determination may also verify the absence of any bounding boxes completely contained within the context determination zone, on the initial pass.

[00191] In another embodiment, the determination may be performed by calculating the distances between the center of the context determination zone and the center of every UI control widget present in the interface, and comparing them with a distance related to the size of the context determination zone.

[00192] If it is determined in 604 that there is at least one user interface control widget within the context determination zone, then a context sensitive UI control widget selection function is chosen. See operation 606. In various embodiments, once an appropriate selection function is chosen, a selection is defined based upon user input. In one embodiment, the selection is defined using method 4.

[00193] Within the context of the present description, a context sensitive selection function refers to a selection function adapted for use in making a selection in a context which has been automatically

determined. In various embodiments, a context sensitive selection function may include logic to use a different context sensitive selection function to define the user's selection, based upon user input. In this way, a user may be able to indicate that the initial context determination is not correct, and that another selection function should be used.

[00194] For example, in one embodiment, a context sensitive UI control widget selection function may include logic such that, if the contact pressure level exceeds a predefined limit P_0, further definition of the selection is handled by a different context sensitive selection function, such as one adapted for selecting hyperlinks. In another embodiment, a contact pressure level exceeding P_0 may cause the context determination zone to expand, and the process of choosing an appropriate selection function to resume, ignoring the UI control widget previously detected within the zone. As an option, future determinations may ignore all UI control widgets. In this way, a context-aware user selection initiated with a contact point in the vicinity of a UI control widget may be redirected to a different type of subject matter without forcing the user to reposition their finger, for example.

[00195] In various embodiments, a context sensitive UI control widget selection function may depend upon the context determination zone. For example, in one embodiment, a context sensitive UI control widget selection function may use the context determination zone as a secondary boundary. In this way, the selection function may be able to continue searching the context determination zone for additional UI control widgets.

[00196] In various embodiments, a context sensitive UI control widget selection function may include logic to handle the case where there is more that one UI control widget within the context determination zone. In one embodiment, the selection function may choose the UI control widget whose center is closest to the center of the context determination zone. In another embodiment, the selection function may choose the UI control widget whose bounding box has greatest overlap with the context determination zone. In still another embodiment, the selection function may choose the UI control widget whose bounding box has an edge or corner closest to the center of the context determination zone.

[00197] In various embodiments, a context sensitive UI control widget selection function may include logic to allow the user to toggle between multiple widgets found within the context determination zone. For example, in one embodiment, the selection function may include a list of all UI control widgets found at least partially within the context determination zone. As an option, the widgets may be arranged in the list in order of distance from the center of the context determination zone. In another embodiment, the selection function may traverse the list sequentially, selecting a different widget. As an option, the list traversal may occur as a function of user input, including but not limited to, gestures, contact pressure velocity, accelerometer data, and/or any other user input. In still another embodiment, switching between different widgets found within the context determination may occur after a predefined amount of time has elapsed, and the selection establishment conditions have not yet been satisfied. In yet another embodiment, a context sensitive UI control widget selection function may use user focus to choose between multiple UI control widgets found within the context determination zone.

[00198] In various embodiments, a context sensitive UI control widget selection function may visually indicate the selection of a widget to the user before the selection has been established. For example, in one embodiment, the selection function may highlight the outline of the widget. In another embodiment, the selection function may shade the widget using a predefined mask of the widget. In still another embodiment, the selection function may shade and/or outline the widget bounding box. In yet another embodiment, the selection function may change and aspect of text associated with the widget, aspects including but not limited to font, text style, text color, and/or any other text property. As a specific example, a context sensitive UI control widget selection function may cause the name of a button to be displayed in blue italics if it is the current context-based selection derived from user input. In this way, the user may see what control is about to be activated before satisfying the selection establishment conditions.

[00199] In various embodiments, a context sensitive UI control widget selection function may have selection establishment conditions that depend upon the type of user interface control widget that is being selected. Some user interface control widgets are multi-state in nature (e.g., sliders, drop down lists, etc.), while others are bi-state (e.g., buttons, check boxes, etc.). In some embodiments, it may be assumed that when a user satisfies the selection establishment conditions for a bi-state UI control widget, they intend for the state of the widget to be toggled. The selection establishment conditions for multi-state UI control widgets, on the other hand, may include the election of a widget state.

[00200] For example, in one embodiment, the selection establishment conditions for a multi-state widget may include one or more primary conditions to establish that the user intends for that particular multi-state widget to be selected, and a secondary condition, to establish the state of that widget.

[00201] In various embodiments, the secondary condition may be satisfied (and the widget state chosen) through user input which includes, but is not limited to, contact pressure. As an option, after the primary selection establishment conditions have been satisfied, the selection function may disregard pre-established pressure triggers (e.g., P_0, global pressure triggers, etc.) until the secondary selection establishment condition has been satisfied.

[00202] For example, in one embodiment, once the primary conditions for selecting a slider widget have been satisfied, a user may select a slider value by varying the contact pressure level between two predefined threshold pressures which represent the slider state extrema. In another embodiment, the contact pressure level at the time of satisfaction of the primary conditions may be used as a zero point, represented by the middle of the slider values. Increasing the contact pressure may increase the slider value, decreasing the contact pressure may decrease the slider value. In other embodiments, these methods may be used to traverse the items within a drop down list, or any other multi-state UI control widgets which may be assigned a value.

[00203] In various embodiments, the secondary selection establishment conditions may be finally satisfied using methods previously discussed, including but not limited to, a contact pressure velocity trigger.

[00204] Once the selection establishment conditions have been satisfied, the state of the UI control widget may be set. For example, a button may be toggled, a check box may be checked or unchecked, a slider value may be set, etc.

[00205] As a specific example of one embodiment, from a user perspective, a user may make contact with and exert pressure upon an interaction surface, with a contact point near a drop down menu. The user may increase the contact pressure until the drop down menu is highlighted. After maintaining that contact pressure level for a few seconds, the list of menu items becomes visible, after which the user may select an item by varying the contact pressure. Once the desired menu item is highlighted, the user may execute a rapid increase in pressure to finalize the selection of that menu item.

[00206] If it is determined in 604 that there is no user interface control widget within the context determination zone, it is then determined whether there is an embedded hyperlink within the context determination zone. See determination 608.

[00207] Within the context of the present description, an embedded hyperlink refers to a hyperlink which is embedded within a text field. For example, iIn one embodiment, embedded hyperlinks may include, but are not limited to, text or image links within a web page, text or image links within a word processing document, and/or any other type of link which may be contained within a document. It should be noted that any link which may be classified as a hyperlink may fall within this definition of embedded hyperlink, or within the definition of a UI control widget.

[00208] In various embodiments, the determination as to whether there is an embedded hyperlink within the context determination zone begins with determining whether there is an embedded hyperlink located at the contact point upon which the zone is based.

[00209] If an embedded hyperlink is not located at the contact point, then it may be determined if there is an embedded hyperlink in the vicinity, within the context determination zone. In various embodiments, the methods described for locating a UI control widget within the context determination zone may also be applied to determining whether there is an embedded hyperlink in the zone. In one embodiment, the bounding boxes may be handled by the application displaying the document in which an embedded hyperlink may be found. In another embodiment, the bounding boxes may be handled at a lower level, by the operating system.

[00210] If it is determined in 608 that there is at least one embedded hyperlink within the context determination zone, then a context sensitive embedded hyperlink selection function is chosen. See operation 610. In various embodiments, once an appropriate selection function is chosen, a selection may be defined based upon user input. In one embodiment, the selection may be defined using method 4.

[00211] In various embodiments, a context sensitive embedded hyperlink selection function may include logic to use a different context sensitive selection function to define the user's selection, based upon user input. In this way, a user may be able to indicate that the initial context determination is not correct, and that another selection function should be used.

[00212] For example, in one embodiment, a context sensitive embedded hyperlink selection function may include logic such that, if the contact pressure level exceeds a predefined limit P_2, further definition of the selection is handled by a different context sensitive selection function, such as one adapted for selecting text. In another embodiment, a contact pressure level exceeding P_2 may cause the context determination zone to expand, and the process of choosing an appropriate selection function to resume, ignoring the embedded hyperlink previously detected within the zone. As an option, future determinations may ignore all embedded hyperlinks. In this way, a context-aware user selection initiated with a contact point in the vicinity of an embedded hyperlink may be redirected to a different type of subject matter without forcing the user to reposition their finger, for example.

[00213] In various embodiments, a context sensitive embedded hyperlink selection function may depend upon the context determination zone. For example, in one embodiment, a context sensitive embedded hyperlink selection function may use the context determination zone as a secondary boundary. In this way, the selection function may be able to continue searching the context determination zone for additional embedded hyperlinks.

[00214] In various embodiments, a context sensitive embedded hyperlink selection function may include logic similar to that used in a context sensitive UI control widget selection function to handle the case where there is more that one embedded hyperlink within the context determination zone. Additionally, in various embodiments, a context sensitive embedded hyperlink selection function may include logic similar to that used in a context sensitive UI control widget selection function to allow a user to toggle between multiple embedded hyperlinks found within the context determination zone.

[00215] In various embodiments, a context sensitive embedded hyperlink selection function may visually indicate the selection of an embedded hyperlink before the selection has been established. For example, in one embodiment, the selection function may change the color of an embedded text hyperlink. In another embodiment, the selection function may change the font, style, or font size of an embedded text hyperlink. In yet another embodiment, the selection function may highlight the borders of a linked image. In this way, the user may see which embedded hyperlink is about to be activated before satisfying the selection establishment conditions.

[00216] In various embodiments, a context sensitive embedded hyperlink selection function may have selection establishment conditions which change, depending upon previous user input. For example, in one embodiment, if the contact pressure level surpasses a value of P_1, but not P_2, the selection establishment condition may change to require the selection of an option from a hyperlink contextual menu. The contextual menu may provide options common to web browsers, including but not limited to “open link”, “copy link”, and/or any other action which may be performed on or with a hyperlink. In various embodiments, the selection of the contextual menu item may be established using methods including, but not limited to, those described for multi-state UI control widgets, or other types of selections.

[00217] In various embodiments, once the selection establishment conditions have been satisfied, the selected embedded hyperlink may be activated.

[00218] If it is determined in 608 that there are no embedded hyperlinks within the context determination zone, it is then determined whether there is a selectable text field within the context determination zone. See determination 612.

[00219] Within the context of the present description, a selectable text field refers to a field of text which a user may select and perform operations upon (e.g., copy, cut, paste, etc.). In one embodiment, a selectable text field may also include any rasterized text which is recognized using an optical character recognition routine.

[00220] In various embodiments, the determination as to whether there is a selectable text field within the context determination zone begins with determining whether there is a selectable text field located at the contact point upon which the zone is based.

[00221] If a selectable text field is not located at the contact point, then it may be determined if there is a selectable text field in the vicinity of the contact point and within the context determination zone. In various embodiments, the methods described for locating a UI control widget within the context determination zone may also be applied to determining whether there is a selectable text field in the zone, including the use of bounding boxes.

[00222] If it is determined in 612 that there is at least one selectable text field intersecting with or within the context determination zone, then a context sensitive selectable text selection function is chosen. See operation 614. In various embodiments, once an appropriate selection function is chosen, a selection may be defined based upon user input. In one embodiment, the selection may be defined using method 4.

[00223] In various embodiments, if there is a selectable text field located at the contact point, the context sensitive selectable text selection function may behave like other text selection functions. For example, in one embodiment, the selection of the text would start at the contact point, and expand with pressure in the direction in which the text would be read.

[00224] In various embodiments, if there is a selectable text field within the context determination zone, but not at the contact point, the selection function may define the selection based upon the entire selectable text field. For example, in one embodiment, the text within selectable text field found in the context determination zone may be selected starting at the beginning of the text field, even if it is not near the contact point. In another embodiment, the selection of the text begins at the location closest to the contact point.

[00225] In various embodiments, a context sensitive selectable text selection function may depend upon the context determination zone. For example, in one embodiment, a context sensitive selectable text selection function may use the context determination zone as a secondary boundary. In this way, the selection function may be able to continue searching the context determination zone for additional selectable text fields.

[00226] In various embodiments, a context sensitive selectable text selection function may include logic to handle the case where there is more than one selectable text field within the context determination zone. In

one embodiment, the selection function may choose the selectable text field which is closest to the contact point, the selection not extending beyond that text field. In another embodiment, the selection function may start the text selection in the selectable text field closest to the contact point; once all of the text in that closest field has been selected, the selection may continue to expand into the next closest text field, starting at the beginning of the field. In still another embodiment, the selection function may include logic similar to that used in a context sensitive UI control widget selection function to handle the case where there is more that one selectable text field within the context determination zone. Additionally, in yet another embodiment, a context sensitive selectable text selection function may include logic similar to that used in a context sensitive UI control widget selection function to allow a user to toggle between multiple selectable text fields found within the context determination zone.

[00227] In various embodiments, a context sensitive selectable text selection function may include logic to use a different context sensitive selection function to define the user's selection, based upon user input. In this way, a user may be able to indicate that the initial context determination is not correct, and that another selection function should be used.

[00228] For example, in one embodiment, a context sensitive selectable text selection function may include logic such that, if the contact pressure level exceeds a predefined limit P_4, further definition of the selection is handled by a different context sensitive selection function, such as one adapted for selecting graphics. In another embodiment, a contact pressure level exceeding P_4 may cause the context determination zone to expand, and the process of choosing an appropriate selection function to resume, ignoring the selectable text field previously detected within the zone. As an option, future determinations may ignore all selectable text fields. In this way, a context-aware user selection initiated with a contact point in the vicinity of a selectable text field may be redirected to a different type of subject matter without forcing the user to reposition their finger, for example.

[00229] In various embodiments, a context sensitive selectable text selection function may visually indicate the selection of a selectable text field before the selection has been established. For example, in one embodiment, the selection function may shade the selected text within a selectable text field. In another embodiment, the selection function may highlight the borders of an entire selectable text field which has been selected.

[00230] In various embodiments, a context sensitive selectable text selection function may have selection establishment conditions which change, depending upon previous user input. For example, in one embodiment, if the contact pressure level surpasses a value of P_3, but not P_4, the selection establishment condition may change to require the selection of an option from a text selection contextual menu. The contextual menu may provide options including, but not limited to, copy, cut, paste, style, send via email, send via SMS, lookup online, and/or any other action which may be performed on selected text. In various embodiments, the selection of the contextual menu item may be established using methods including, but not limited to, those described for multi-state UI control widgets, or other types of selections.

[00231] If it is determined in 612 that there is no text within the context determination zone, it is then determined whether there is a selectable graphic within the context determination zone. See determination 616.

[00232] Within the context of the present description, a selectable graphic refers to an image or display, or a portion of an image or display, which a user is able to select and perform operations upon (e.g., copy, cut, paste, save, etc.). In one embodiment, a selectable graphic may refer to any portion of a user interface which is able to be captured with a screenshot.

[00233] In various embodiments, the determination as to whether there is a selectable graphic within the context determination zone begins with determining whether there is a selectable graphic located at the contact point upon which the zone is based.

[00234] If a selectable graphic is not located at the contact point, then it may be determined if there is a selectable graphic in the vicinity of the contact point and within the context determination zone. In various embodiments, the methods described for locating a UI control widget within the context determination zone may also be applied to determining whether there is a selectable text field in the zone, including the use of bounding boxes. As an option, in addition to determining the boundaries of the bounding boxes within the context determination zone, it may also be determined whether they are able to be selected (e.g., checking a system flag, DRM, copy protection, etc.).

[00235] If it is determined in 616 that there is at least one selectable graphic within the context determination zone, then a context sensitive selectable graphic selection function is chosen. See operation 618. In various embodiments, once an appropriate selection function is chosen, a selection may be defined based upon user input. In one embodiment, the selection may be defined using method 4.

[00236] In various embodiments, if there is a selectable graphic located at the contact point, the context sensitive selectable graphic selection function may behave like other graphic selection functions. For example, in one embodiment, the selection of the graphic may be defined using method 4.

[00237] In various embodiments, if there is a selectable graphic within the context determination zone, but not at the contact point, the selection function may define the selection based upon the entire selectable graphic object. For example, in one embodiment, an image file embedded in a document near the contact point and at least partially within the context determination zone may be selected in its entirety. In another embodiment, said image file may be partially selected, starting at a location within the image that is closest to the contact point, and scaling as a function of user input and in a manner defined by the selection function.

[00238] In various embodiments, a context sensitive selectable graphic selection function may depend upon the context determination zone. For example, in one embodiment, a context sensitive selectable graphic selection function may use the context determination zone as a secondary boundary. In this way, the selection function may be able to continue searching the context determination zone for additional selectable graphic objects.

[00239] In various embodiments, a context sensitive selectable graphics selection function may include logic to handle the case where there is more than one selectable graphic object within the context determination zone. In one embodiment, the selection function may choose the selectable graphic object which is closest to the contact point.

[00240] In another embodiment, the selection function may include logic similar to that used in a context sensitive UI control widget selection function to handle the case where there is more that one selectable graphic object within the context determination zone. Additionally, in yet another embodiment, a context sensitive selectable graphic selection function may include logic similar to that used in a context sensitive UI control widget selection function to allow a user to toggle between multiple selectable graphic objects found within the context determination zone.

[00241] In various embodiments, a context sensitive selectable graphics function may pass control to another user interface function, depending upon user input. In this way, a user may be able to indicate that the initial context determination is not correct, and that they wish to activate a different user interface routine (e.g., application launcher, favorites list, system settings, etc.).

[00242] For example, in one embodiment, a context sensitive selectable graphic selection function may include logic such that, if the contact pressure level exceeds a predefined limit P_6, further user input is handled by a different context sensitive selection function, such as one adapted for selecting graphics. In another embodiment, a contact pressure level exceeding P_4 may cause the context determination zone to expand, and the process of choosing an appropriate selection function to resume, ignoring the selectable graphic previously detected within the zone. As an option, future determinations may ignore all selectable graphics. In this way, a context-aware user selection initiated with a contact point in the vicinity of a selectable graphic may be redirected to a different type of subject matter without forcing the user to reposition their finger, for example.

[00243] In various embodiments, a context sensitive selectable graphics selection function may visually indicate the selection of a selectable graphic object before the selection has been established. For example, in one embodiment, the selection function may shade the selected graphic object. In another embodiment, the selection function may highlight the borders of a graphic object which has been selected.

[00244] In various embodiments, a context sensitive selectable graphics selection function may have selection establishment conditions which change, depending upon previous user input. For example, in one embodiment, if the contact pressure level surpasses a value of P_5, but not P_6, the selection establishment condition may change to require the selection of an option from a graphic selection contextual menu. The contextual menu may provide options including, but not limited to, copy, cut, paste, set as wallpaper, send via email, send via SMS, and/or any other action which may be performed on selected graphics. In various embodiments, the selection of the contextual menu item may be established using methods including, but not limited to, those described for multi-state UI control widgets, or other types of selections.

[00245] If it is determined in 616 that there is no selectable graphics within the context determination zone, then the determination zone is expanded. See operation 620.

[00246] In one embodiment, the context determination zone may be expanded by a fixed number of pixels. In another embodiment, the determination zone may be expanded by a scaling factor. Once the context determination zone has been expanded, the context determinations are performed again.

[00247] In one embodiment, if the context determination zone reaches a predefined threshold size, the user may be informed that a context could not be determined and a selection cannot be made. Other forms of user feedback indicating a failure to determine context include an alert, a prompt, audio feedback, visual feedback, LED light, and/or any other type of feedback.

[00248] In various embodiments, the user may be able to specify which contexts they wish to be detected automatically. In some embodiments, additional types of subject matter may be detectable, including types of text data, such as dates, email addresses, phone numbers, and/or any other type of text information.

[00249] In some embodiments, contextual selections may be performed using method 600 only in situations where a contact pressure based form of user interaction has not been defined. In other embodiments, contextual selections may be made system wide using method 600 or similar methods.

[00250] Figure 7 shows a device 700 having a backtouch interface, in accordance with one embodiment. As an option, the device 700 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the device 700 may be implemented out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00251] In the context of the present description, a device with a backtouch interface refers to a device with one or more backtouch sensors or backtouch switches. In one embodiment, a device with a backtouch interface may also include one or more other sensors and/or buttons, including but not limited to cameras, hardware buttons, and/or any other type of device or control. A device with a backtouch interface may also be referred to as a backtouch-enabled device.

[00252] Within the context of the present description, a backtouch sensor refers to an interaction surface located on a device which has reduced user visibility while the device is being operated, because it is obscured by the device itself. For example, in one embodiment, a backtouch sensor may be located on the back of the device, facing away from the user as they look at a display on the front side. A backtouch sensor may result in a better user interface experience since the user is able to interact with the device without obscuring the front display with an implement of interaction.

[00253] Additional embodiments may be described using the terms 'front' and 'back', but a backtouch-enabled device is not limited to those having parallel surfaces. Within the context of the present description, the terms 'front' or 'front surface' and 'back' or 'back surface' refer to any two surfaces of any portion, piece, section, slice, component, part, and/or face of a device or its parts.

[00254] In various embodiments, a backtouch interface may also be a display. For example, in one embodiment, a device may have high-resolution touchscreens on the front and back. In another embodiment of a multi-display, backtouch-enabled device, the front face may be a high-resolution touchscreen and the back face may be a low-resolution touchscreen. As an option, one or more of the touch screens in these embodiments may be black and white. In still another embodiment, the front and back displays may utilized different display technologies and/or different display properties. For example, in one embodiment, the front display may be a high-resolution trans missive touchscreen and the back display may be a low-resolution reflective touchscreen.

[00255] As shown, device 700 is an example of one embodiment of a backtouch-enabled device, possessing a backtouch sensor 702 and a display 704. In various embodiments, the display 704 may also be an interaction surface.

[00256] As previously defined, an interaction surface is a surface capable of sensing touch, pressure, proximity, or any combination thereof. In various embodiments, a backtouch sensor may be capable of sensing one or more of touch, pressure, or proximity.

[00257] For example, in one embodiment, a backtouch sensor may be a track pad. Within the context of the present description, a track pad is a touch sensitive pointing device which can detect the motion and position of an implement of interaction (e.g., user finger, stylus, etc.).

[00258] In various embodiments, a backtouch sensor may include a resistive touch sensor. In one embodiment, a resistive touch sensor is made up of two thin, conducting layers separated by a narrow gap. When an implement of interaction presses down on the outer layer, the two layers make contact at that point. A voltage may be applied across the upper layer, from top to bottom. The resistive touch sensor may act as a voltage divider; by measuring the output voltage on the lower layer, the vertical position of the touch position may be sensed. Swapping the voltage to the sides of the upper layer may allow the horizontal touch position to be sensed.

[00259] In various embodiments, a backtouch sensor may include a capacitive touch sensor. In one embodiment, a capacitive touch sensor is made of two layers of parallel conductive lines, separated by an insulator. The layers are arranged such that the conductive lines are perpendicular. When an implement of interaction is placed over the conducting lines, there is a change in capacitance. A high frequency signal may be applied to pairs of conducting lines; the resulting current that passes between the conducting lings is proportional to the capacitance between the conducting lines. This current may be used to sense the touch or proximity of an implement of interaction. A capacitive touch sensor may be capable of detecting more than one contact point or contact area.

[00260] The backtouch-enabled device shown in Figure 7 is one exemplary embodiment. The geometry of a backtouch-enabled device need not be confined to parallel surfaces, with a distinct front and back. For example, in one embodiment, the device may have fold-out sections with interaction surfaces which become backtouch interfaces once the sections are folded out. In another embodiment, the backtouch-enabled device

may be composed of curved parts, multiple parts, or complex plan form parts. In still another embodiment, the backtouch-enabled device may not be rectilinear in any outline and/or cross section. In yet another embodiment, the device may have one or more curved or non-planar surfaces, including but not limited to surfaces which are concave or convex. In some embodiments, the device may have one or more surfaces which are rigid or hard. In other embodiments, the device may have one or more surfaces which are soft or flexible. In still other embodiments, the device may change shape, depending on the mode of operation (e.g., slide-out hardware keyboard, plug-in modules, etc.).

[00261] In one embodiment, a backtouch-enabled device may have one or more backtouch sensors located on plane(s) parallel to the plane of a display. For example, see device 700. In another embodiment, a backtouch-enabled device may have one or more backtouch sensors located on plane(s) that are at an angle to the plane of a display.

[00262] In one embodiment, a backtouch sensor may be located on a plane which is completely obscured from the display. In another embodiment, a backtouch sensor may be located on a plane which is partially obscured from the display. For example, a backtouch sensor may be located on the back side of a transparent or translucent display.

[00263] In one embodiment, a backtouch interface is an interaction surface which may be made up of one or more touch sensors, one or more pressure sensors, one or more proximity sensors, one or more switches, or any combination of one or more such sensors or switches. In another embodiment, the switches which are part of a backtouch interface may be real or virtual, displayed or mechanical, soft or hard, or any combination of these properties.

[00264] In various embodiments, gestures and interactions described in terms of a backtouch interface may also be performed on sidetouch (left and right sides of a device) and captouch (top and bottom sides of a device) interfaces.

[00265] Figure 8 shows a method 800 for providing feedback to the user of a backtouch interface, in accordance with one embodiment. As an option, the method 800 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the method 800 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00266] As shown, it is determined whether the backtouch interface is enabled. See determination 802.

[00267] Within the context of the present description, an enabled interface or surface refers to an interface or surface which is not disabled. Within the context of the present description, a disabled interface or surface refers to an interface or surface which is not passing user input to any process, system, application, or routine. In one embodiment, a disabled interface may continue to sense user input, even though it is not used. In another embodiment, a disabled interface may be able to recognize a predefined form or type of user input which then places the interface in an enabled state. As a specific example, in one embodiment, a disabled backtouch interface may not be used to make a selection until it detects a predefined pattern of increases and

decreases of contact pressure. In this way, interfaces may be disabled to avoid unwanted input, and easily enabled when desired.

[00268] It is important to note that in various embodiments, an interface or surface may be enabled with respect to one type of user input, and disabled with respect to another type of user input. For example, it may be possible for an interaction surface to be enabled with respect to touch interactions, and disabled with respect to contact pressure or proximity.

[00269] In various embodiments, a backtouch interface may be enabled in response to user input. For example, in one embodiment, a backtouch interface may be enabled in response to a predefined gesture performed on an interaction surface receptive to touch. In another embodiment, a backtouch interface may be enabled in response to a predefined pattern of increases and decreases of contact pressure exerted upon an interaction surface receptive to pressure. In yet another embodiment, a backtouch interface may be enabled by a predefined series of taps or impacts with the device. As an option, the taps or impacts may be detected by an accelerometer. In still another embodiment, a backtouch interface may be enabled by toggling a hardware or software control (e.g., button, switch, etc.).

[00270] In various embodiments, a backtouch interface may be enabled without specific user input. For example, in one embodiment, a backtouch interface may be enabled by a backtouch-enabled application. In another embodiment, a backtouch interface may be enabled when the device orientation is within a predefined range. In yet another embodiment, a backtouch interface may always be enabled.

[00271] If it is determined that the backtouch interface is enabled, then it is determined whether there is an implement of interaction in proximity of the backtouch interface. See determination 804.

[00272] In various embodiments, there may be a threshold proximity that may be achieved before determination 804 is satisfied. In one embodiment, a user may define the threshold proximity. In another embodiment, the threshold proximity may be predefined within the operating system. In still another embodiment, the threshold proximity may be predefined on a per-application basis.

[00273] If it is determined that an implement of interaction is in proximity to the backtouch interface, a visual indication of the proximity is displayed. See operation 806.

[00274] In various embodiments, the location of the implement of interaction in proximity to the backtouch interface may be indicated to the user. For example, in some embodiments, a point associated with the location of the implement may be displayed. In one embodiment, the point may be the centroid of the area with the highest proximity value. As an option, the point may be represented as a circle, a crosshair, and/or any other shape or icon.

[00275] In one embodiment, the point associated with the location of the implement may be displayed using a predefined color. As an option, the user may be able to select the color used. In yet another embodiment, the point may be displayed by inverting the preexisting contents of the display located at that point.

[00276] In various embodiments, an area associated with the location of the implement may be displayed. For example, in one embodiment, the area may be the area with proximity values above a preset threshold value. In another embodiment, the area may be a circle centered upon the centroid of maximum proximity values. As an option, the size of the circle may be similar to a fingertip.

[00277] In one embodiment, the area associated with the location of the implement may be displayed with colored shading. As an option, the user may preset the color of the shading. In another embodiment, the area may be indicated by increasing the color brightness (e.g., moving towards white within a color space, etc.) of the display content within the area. In yet another embodiment, the area may be displayed by reducing the color brightness (e.g., moving towards black within a color space, etc.) of the display content outside the area. As an option, the area may be displayed with a sharp boundary, or with a softened boundary, creating a glow effect.

[00278] In various embodiments, the degree of proximity of the implement of interaction to the backtouch interface may be indicated to the user. For example, in one embodiment, the color of a point or area being displayed may be given a degree of transparency dependent upon the proximity values, allowing the original display content to be viewed. As an option, the proximity value may be averaged over the area, and a single transparency value given to the color applied. In another embodiment, the color of the content displayed within the area may be given a color brightness based upon the proximity, such that the area is white right before contact is made. In yet another embodiment, the color of the content displayed outside the area may be given a color brightness based upon an inverse relationship with the proximity, such that all but the area is black right before contact is made.

[00279] As shown, it is determined if an implement of interaction is in contact with the backtouch interface. See determination 808. If it is determined that there is no contact, the proximity may continue to be determined and displayed.

[00280] If it is determined that an implement of interaction is in contact with the backtouch interface, a visual indication of the contact is displayed. See operation 810.

[00281] In various embodiments, a visual indication of contact with a backtouch interface may differ from a visual indication of contact with a front display, where the contact point and area is usually obscured by an implement of interaction. For example, in one embodiment, the contact point may be displayed, instead of or in addition to the contact area. In another embodiment, the visual representation of the interior of the contact area may be colored. In yet another embodiment, the contact area may be represented by an iconic version of a fingerprint. In still another embodiment, the contact area may be distorted so as to appear to bulge out of the display. As an option, this distortion may increase as a function of contact pressure.

[00282] As shown, once the user has been given feedback regarding contact with the backtouch interface, further user interaction is handled by a different routine. See operation 8. For example, methods 4 or 6 may be implemented at this point, utilizing backtouch contact pressure and contact point to define a selection.

[00283] Figure 9 shows a pressure-sensitive user interface 900 for making a selection using a backtouch interface, in accordance with one embodiment. As an option, the user interface 900 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 900 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00284] As shown, the user interface 900 may be utilized in making a selection based in part on pressure exerted by the user upon a backtouch interface. For example, in one embodiment, a user's finger 902 may exert a small amount of force over contact area 904, which is centered on contact point 906. In one embodiment, contact area 904 and contact point 906 may be displayed on top of the content already being displayed, to assist the user in making contact at the desired location. In another embodiment, the contact point 906 may be displayed as a symbol, such as a plus sign, which may be rotated to an orientation estimated to match that of the contacting finger. As an option, the finger orientation may be estimated using the size and shape of the contact area, detected location of other fingers, and/or any other user input or observable properties.

[00285] If the contact pressure level is sufficient, then a selection area 908 having a selection boundary 910 and a secondary boundary 912 (indicating uncertainty related to the contact area) is calculated and displayed. As an option, the selection may be defined using method 4 or 6, or any other method of defining a selection based upon contact pressure.

[00286] Figure 10 shows a user interface 1000 for defining settings associated with a backtouch interface, in accordance with one embodiment. As an option, the user interface 1000 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 1000 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00287] In one embodiment, the user interface 1000 may include a plurality of check boxes 1002 which represent various types of user interactions detectable by the backtouch interface. The types of interactions may include, but are not limited to, pressure, touch, proximity, and/or any other type of user interaction. Through these checkboxes, a user may limit a backtouch interface to only certain types of interactions. As an option, the user interface 1000 may only present checkboxes for interaction types detectable by the particular backtouch interface associated with the settings being defined.

[00288] In one embodiment, the user interface 1000 may include a plurality of check boxes 1004 which represent various methods of enabling a backtouch interface. As an option, in one embodiment, more than one method of activation may be selected.

[00289] In one embodiment, the collection of backtouch interface enablement methods 1004 may include a checkbox 1006 which allows the interface to be activated by a gesture. In one embodiment, the gesture may be predefined within an application or operating system. In another embodiment, the user interface 1000 may include a button 1008 to allow a user to specify a gesture to activate the backtouch interface. As an option,

the user may be presented with an interface where they may specify the gesture by performing it. In yet another embodiment, the user may choose from a plurality of predefined gestures.

[00290] In one embodiment, the collection of backtouch interface enablement methods 1004 may include a checkbox 1010 which allows the interface to be activated by a grip. In the context of the present description, a grip refers to the set of sensor data associated with a particular manner of holding a device. The sensor data associated with a grip may include, but is not limited to, points and areas of contact on one or more interaction surfaces, device orientation, contact pressure levels exerted in one or more contact areas, proximity data (e.g., proximity to portions of a users hand not in contact with the device, etc.), and/or any other sensor data.

[00291] In one embodiment, the backtouch interface-enabling grip may be predefined within an application or operating system. In another embodiment, the user interface 1000 may include a button 1012 to allow a user to specify a grip to enable the backtouch interface. As an option, the user may be presented with an interface where they may specify the grip by performing it. In yet another embodiment, the user may choose from a plurality of predefined grips.

[00292] In one embodiment, the collection of backtouch interface enablement methods 1004 may include a checkbox 1014 which keeps the backtouch interface enabled whenever the device is powered on, similar to a primary touch screen, for example. In another embodiment, the collection of backtouch interface enablement methods 1004 may include a checkbox 1016 which keeps the backtouch interface disabled.

[00293] In one embodiment, the user interface 1000 may include a check box 1018 which allows the criteria for backtouch interface enablement to be set on a per-application basis. As an option, check box 1018 may allow any application to override the preferences set with the plurality of check boxes 1004.

[00294] In one embodiment, the user interface 1000 may include a plurality of check boxes 1020 which represent various methods of indicating that a backtouch interface is enabled. As an option, in one embodiment, more than one indicator may be selected.

[00295] In one embodiment, the collection of indicator check boxes 1020 may include a checkbox 1022 which indicates that the backtouch interface is enabled by displaying a colored border around the edge of a display. In one embodiment, the colored border may be animated.

[00296] In one embodiment, the collection of indicator check boxes 1020 may include a checkbox 1024 which indicates that the backtouch interface is enabled using an LED. In one embodiment, the LED may indicate the enabled backtouch interface through a specific color, with other colors being reserved for indicating other device states. In another embodiment, the LED may pulse or flash when the backtouch interface is enabled.

[00297] In one embodiment, the collection of indicator check boxes 1020 may include a checkbox 1026 which indicates that the backtouch interface is enabled by displaying a colored border around a status bar (e.g., a minimal bar common to most user interfaces, etc.). In one embodiment, the colored border may be animated.

[00298] In one embodiment, the collection of indicator check boxes 1020 may include a checkbox 1028 which indicates that the backtouch interface is enabled by displaying an icon. In one embodiment, the icon may be located within a status bar.

[00299] In one embodiment, the collection of indicator check boxes 1020 may include a checkbox 1030 which indicates that the backtouch interface is enabled by changing the color of a status bar. In one embodiment, the color change may be animated.

[00300] In one embodiment, the collection of indicator check boxes 1020 may include a checkbox 1032 which allows the backtouch interface to be enabled without any indication to the user. As an option, this preference may be overridden by an application.

[00301] In various embodiments, the user interface 1000 may allow a user to configure the type and style of feedback provided while an enabled backtouch interface is being used. For example, in one embodiment, the user interface 70.0002.3-00 may include a button 1034 which allows a user to specify whether or not feedback is provided while the backtouch interface is being used. As an option, this preference may be overridden by applications (e.g., an application may be configured such that it provides backtouch interface feedback independent of any system preferences, etc.).

[00302] In one embodiment, the user interface 1000 may include a button 1036, which presents a user interface which allows a user to specify the style of feedback provided when a backtouch interface is being used. For example, a user may configure the feedback provided when an implement of interaction is in proximity to, contact with, and/or exerting pressure on the backtouch interface.

[00303] In one embodiment, the user interface 1000 may include a button 1038, which allows a user to test the style parameters they defined using button 1036. For example, in one embodiment, button 1038 may present a user interface where a user may experiment with a backtouch interface, observing the feedback styles they have configured. As an option, this interface may provide a quick way to reconfigure the feedback style.

[00304] In various embodiments, the user interface 1000 may allow a user to configure the sensitivity of a backtouch interface. In the context of the present description, the sensitivity of a backtouch interface refers to the threshold level of interaction (e.g., proximity, contact, pressure, etc.) which a backtouch interface may receive before treating the interaction as being intentionally made by a user. In this way, backtouch interactions incidental to device usage may be ignored, while intentional backtouch user interactions may be acted upon.

[00305] In one embodiment, the user interface 70.0002.3-00 may include a plurality of checkboxes 1040 that represent a plurality of backtouch interface sensitivity levels. The backtouch interface sensitivity levels may include, but are not limited to, predefined levels (e.g., “high”, “standard”, “low”, etc.), user defined levels, automatically defined levels, and/or any other type of sensitivity level.

[00306] In one embodiment, the user interface 1000 may allow a user to specify the sensitivity levels for particular aspects of a backtouch interface (e.g., proximity, contact, pressure, etc.). As an option, the user

interface may provide the user with the ability to save and load user defined backtouch interface sensitivity profiles.

[00307] In the context of the present description, an interface sensitivity profile refers to a collection of sensitivity parameters associated with various aspects of an interaction interface. The sensitivity parameters may include, but are not limited to, an activation threshold, a maximum signal beyond which interaction is ignored, sample rate(s), and/or any other parameter which may be associated with an interaction interface. As an option, the sensitivity parameters may be specific to particular types of interaction (e.g., proximity, contact, pressure, etc.).

[00308] In the context of the present description, an activation threshold refers to a threshold signal below which interaction is ignored. An activation threshold may be set for different types of user interaction (e.g., pressure, contact, proximity, etc.). For example, in one embodiment, an interaction surface may have a pressure activation threshold of P, below which all pressure interactions are ignored.

[00309] It is important to recognize the distinction between activation and enablement. In various embodiments, activation serves as a filter of incidental interactions, defining the weakest sensor signal which may not be ignored. Enablement serves a similar purpose, to ignore unwanted interactions; a disabled interface may not act upon any sensor signals except those related to enabling the interface. In other words, activation filters sensor signals based on strength, while enablement filters sensor signals based on the signal itself.

[00310] In one embodiment, the plurality of checkboxes 1040 may include an "automatic" checkbox, representing a backtouch interface sensitivity profile automatically determined by the device. As an option, if an automatic sensitivity profile has not been created, the user may be presented with the option of initiating the process of automatically determining an optimal backtouch interface sensitivity profile.

[00311] In one embodiment, the user interface 1000 may include a button 1042 which allows a user to initiate the process of automatically determining an optimal backtouch interface sensitivity profile. In the context of the present description, an optimal interface sensitivity profile refers to a sensitivity profile which would allow an interface to remain enabled all the time, with minimal accidental inputs. In one embodiment, the process of automatically determining an optimal backtouch interface sensitivity profile may include gathering data over a predefined amount of time. As an option, the time remaining may be displayed in user interface 1000. During this learning period, the backtouch enablement preferences specified in checkboxes 1004 may be overridden, and instead the user is required to enable the backtouch interface with a specific method, chosen such that accidental enablement is highly unlikely (e.g., two step activation using gestures, hardware switch with on-screen confirmation, etc.). This facilitates separating intentional interactions from incidental interactions. Once enabled, the backtouch interface may remain enabled for a short period of time. During the learning period, the device may gather data, including but not limited to sensor data from the backtouch interface, changes in orientation, backtouch interface enablements, and/or any other data related to use of the device. Once the learning period has elapsed, the gathered data may be used to estimate the levels

of meaningless, incidental backtouch interaction, such as interaction due to holding the device. As an option, in another embodiment, the user may be able to specify the length of the learning period. In yet another embodiment, the user may be able to specify desired accuracy of the sensitivity level, balancing the reduction of unwanted interactions with a possible increase in intentional interactions being missed.

[00312] In one embodiment, the user interface 1000 may include a button 1044 which allows a user to test the specified sensitivity settings. For example, in one embodiment, button 1044 may present a user interface which provides feedback regarding interactions with the backtouch interface. As an option, the testing user interface may utilize a default set of backtouch feedback settings, if the user had previously turned feedback off. In another embodiment, button 1044 may activate a backtouch interface, and present feedback to the user within user interface 1000. As an option, user interface 1000 may ignore any input received from the backtouch interface, only provide feedback related to the user interactions. In this way, a user may test the settings with the backtouch interface without accidentally interacting with any checkboxes, buttons, or other element of user interface 1000.

[00313] In various embodiments, the interfaces of Figure 10, as well as any other previous or subsequent interfaces, may take the form of webpages displayed utilizing a web browser on any desired computer, handheld device, etc. In such case, any of the parameters or other input disclosed herein may be entered without the use of the host device, whereby such parameters or other input (or derivatives thereof) may be pushed to the device for configuration/updating purposes.

[00314] Figure 11 shows a user interface 1100 for defining settings associated with a pressure-sensitive interface, in accordance with one embodiment. As an option, the user interface 1100 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 1100 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00315] In one embodiment, the user interface 1100 may include a checkbox 1102 to allow the user to enable the pressure-receptive aspect of one or more interaction surfaces. In one embodiment, this checkbox may enable all pressure-receptive surfaces. In another embodiment, the user may be able to specify which pressure-receptive surfaces shall be enabled. In various other embodiments, enablement of pressure-receptive surfaces may be accomplished through user input outside of user interface 1100. Pressure-receptive surface enabling user input may include, but is not limited to, gestures, software buttons, hardware buttons, accelerometer data, contact pressure patterns, and/or any other form of user input.

[00316] In one embodiment, the user interface 1100 may include a plurality of check boxes 1104 which allow a user to specify which types of feedback to provide when the pressure-sensitive interface(s) is activated, if any at all. For example, in one embodiment, the user may specify a sound which plays whenever the pressure-sensitive interface is activated. In another embodiment, the user may specify a form of visual feedback to be given when the pressure-sensitive interface is activated. As an option, the user may select from a plurality of predefined forms of feedback.

[00317] In one embodiment, the user interface 1100 may include a checkbox 1106 which allows a user to specify whether they want visual feedback regarding contact pressure level. As previously described, contact pressure level may be visually represented in a number of ways, including, but not limited to, a color which is part of a two color spectrum, a percentage, a unitless number, and/or any other representation of a value located within a finite range. In one embodiment, user interface 1100 may allow a user to specify the type of contact pressure level feedback. As an option, a separate user interface may be presented to the user to define the form of the feedback.

[00318] In various embodiments, the user interface 1100 may be used to define the pressure activation threshold. In the context of the present description, a pressure activation threshold is the smallest contact pressure level which may not be ignored. In one embodiment, the current pressure activation threshold level 1108 may be displayed within user interface 1100. The current pressure activation threshold level may be displayed as a unitless number, a percentage of the maximum measurable contact pressure level, a color, a scale, and/or any other method of representing a value located within a finite range.

[00319] In one embodiment, the user interface 1100 may include a button 1110 which allows a user to manually specify the pressure activation threshold level. In one embodiment, the user may be presented with an interface where they may enter a specific value to be used as the pressure activation threshold. In another embodiment, the user may be prompted to exert the desired threshold pressure on a pressure-sensitive interface, confirming their selection by maintaining the desired contact pressure for a predefined amount of time. As an option, the user may be prompted to repeat this process more than one time, after which the resulting pressure levels may be averages. In yet another embodiment, the user may be given the chance to test the newly specified pressure activation threshold level.

[00320] In one embodiment, the user interface 1100 may include a button 1112 which resets the pressure activation threshold level to a predefined, default value. As an option, the user may be prompted to confirm this action before the default value is applied.

[00321] In one embodiment, the user interface 1100 may include a button 1114 which initiates a process which determines an optimal pressure activation threshold level. In the context of the present description, an optimal pressure activation threshold level refers to an activation threshold which would allow an interface to remain enabled all the time, with minimal erroneous inputs. In one embodiment, the process of automatically determining an optimal pressure activation threshold level may include gathering data over a predefined amount of time. As an option, the time remaining may be displayed in user interface 1100.

[00322] During this learning period, the pressure activation threshold may temporarily be set to a level sufficiently high that an accidental activation is highly unlikely. This facilitates separating intentional interactions from incidental interactions. During the learning period, the device may gather data, including but not limited to sensor data from the pressure-sensitive interface, changes in orientation, pressure-sensitive interface activations, and/or any other data related to use of the device. Once the learning period has elapsed, the gathered data may be used to estimate the levels of meaningless, incidental pressure interaction, such as

interaction due to holding the device. As an option, in another embodiment, the user may be able to specify the length of the learning period. In yet another embodiment, the user may be able to specify desired accuracy of the pressure activation threshold level optimization, balancing the reduction of unwanted interactions with a possible increase in intentional interactions being missed.

[00323] In one embodiment, the user interface 1100 may display the amount of time remaining in an ongoing learning period. See, for example, text field 1116. In various embodiments, the time remaining in the learning period may be displayed in user interfaces other than 1100. User interfaces where the remaining time may be displayed include, but are not limited to, a status bar, a contextual menu, a shortcut menu, a pop-up interface adapted for managing various interaction interfaces, and/or any other user interface.

[00324] In one embodiment, the user interface 1100 may include a plurality of checkboxes 1118 which represent a plurality of forms of feedback associated with the automatic determination of an optimal pressure activation threshold level. During the learning period, it may be helpful to provide the user with feedback every time the pressure-sensitive interface is activated. The forms of feedback include, but are not limited to, a sound, vibration, screen flash, and/or any other form of feedback. In one embodiment, the feedback associated with the automatic determination of an optimal pressure activation threshold level may override preferences set elsewhere. In another embodiment, the user may specify the parameters of these forms of feedback.

[00325] The user interface 1100 may be used to define and manage touch states. In one embodiment, a preset number of global touch states may be defined, which the operating system and applications may make use of. In another embodiment, the touch states may be defined on a per-application basis.

[00326] In one embodiment, the user interface 1100 may include a button 1120 which presents the user with a user interface that facilitates the definition of touch states. As an option, the user may be able to select from a plurality of predefined touch state definitions. Additionally, the user interface 1100 may display the currently defined touch states. See, for example, text field 1124. The touch states may be represented as a unitless number, a percentage of the range of allowable contact pressure levels, a color, and/or any other representation of a contact pressure level.

[00327] In one embodiment, the user interface 1100 may include a button 1122 which allows the user to reset the touch state definitions to a predefined default definition. As an option, the user may be prompted for confirmation before resetting the touch state definition to default values.

[00328] Figure 12 shows a method 1200 for assisting a user in defining touch states, in accordance with one embodiment. As an option, the method 1200 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the method 1200 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00329] As shown, the highest touch state is defined. See operation 1202. In one embodiment, the highest touch state may be predefined within the operating system. In another embodiment, the highest touch state may be specified by the user, in the form of a contact pressure value.

[00330] In various embodiments, the highest touch state may be defined through user interaction with a pressure-sensitive interface. For example, in one embodiment, a user may be prompted to exert a level of contact pressure beyond which the highest touch state may be triggered. As an option, the user may be prompted to exert this pressure multiple times, with the resulting values averaged. In another embodiment, the user may be prompted to exert the highest contact pressure level which is comfortable, and then defining the highest touch state using a contact pressure level slightly lower than that being exerted.

[00331] Once the highest touch state has been defined, the remaining spectrum of contact pressures is partitioned into the remaining touch states and displayed. See operation 1204.

[00332] In the context of the present description, the spectrum of contact pressures refers to the range of contact pressure levels a user may exert to interact with the device. For example, in one embodiment, the lower end of a spectrum of contact pressures may be equivalent to the pressure activation threshold level. In various embodiments, there may be multiple contact pressure spectrums defined. For example, in one embodiment, there may exist a distinct spectrum of contact pressures for each pressure-sensitive interaction surface. In another embodiment, there may exist a spectrum of contact pressures which is partitioned into touch states (a touch state spectrum), and a different spectrum of contact pressures for use with contact pressure levels (a contact pressure level spectrum).

[00333] In one embodiment, the touch state spectrum may have extrema defined by the user. As an option, the lower bound of the touch state spectrum may be the same as pressure activation threshold level.

[00334] In one embodiment, the touch state spectrum may be partitioned such that all touch states contain the same fraction of the touch state spectrum. In another embodiment, the touch state spectrum may be partitioned such that all touch states have equal portions of the touch state spectrum except for the highest touch state. In yet another embodiment, the touch state spectrum may be partitioned such that the touch states are weighted, some containing larger fractions of the spectrum than others. As an option, the weight factors may be predefined or may be user definable.

[00335] In one embodiment, the partitioned touch state spectrum may be displayed as a geometric shape (e.g., circle, rectangle, etc.) which has been segmented according to the touch state partitions. In another embodiment, the partitioned touch state spectrum may be displayed as an array of percentages of the total spectrum. In yet another embodiment, the touch state spectrum may be displayed as an array of contact pressure levels associated with the boundaries of the partitions.

[00336] Once the touch state spectrum has been partitioned and displayed, the user is given the opportunity to adjust the touch states. See operation 1206.

[00337] In one embodiment, the user may adjust the contact pressure levels associated with the touch states by specifying the numerical values of specific contact pressure levels. In another embodiment, the user

may adjust the touch states by interacting with a graphical representation of the partitioned touch state spectrum. In yet another embodiment, the user may adjust the touch states by defining new partitions using a pressure-sensitive interface. As an option, the user may exert the desired contact pressure level to set the boundaries of a touch state.

[00338] Once the touch states have been adjusted, the newly partitioned touch state spectrum is verified. See operation 1208.

[00339] In one embodiment, the touch state spectrum may be verified by asking the user to confirm their choice through a user interface. In another embodiment, the user may verify the touch state spectrum by utilizing it in a testing interface. As an option, the user may be given visual feedback regarding the exact contact pressure level being exerted, in addition to the current touch state.

[00340] Figure 13 shows a user interface 1300 for assisting a user in defining touch states, in accordance with one embodiment. As an option, the user interface 1300 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 1300 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00341] In one embodiment, the user interface 1300 may include a graphical representation 1302 of a touch state spectrum, hereinafter referred to as touch space spectrum rendering 1302. As another embodiment, the touch space spectrum rendering 1302 may be colored with the spectrum of colors between two colors representing spectrum extrema. As an option, the same colors used to provide pressure dependent feedback to the user of a pressure-sensitive interface may be used here.

[00342] The touch space spectrum rendering 1302 found in user interface 1300 may be broken up into ranges of contact pressure representing touch states. In various embodiments, the touch space spectrum rendering may be partitioned by one or more touch state dividers 1304. In one embodiment, the touch state dividers may simply be a line drawn between two touch states. In another embodiment, the touch state dividers may also display the contact pressure level separating those two touch states.

[00343] In various embodiments, a plurality of touch states may be defined. In one embodiment, the user may specify the number of touch states to define. In another embodiment, the number of touch states may defined within the operating system. In still another embodiment, the number of touch states may be defined on a per-application basis, by the applications themselves or by the user (if so allowed by the application). In yet another embodiment, there may exist a set of default touch states of a fixed number which may be overridden by a different set of touch states defined within an application.

[00344] In various embodiments, the touch space spectrum rendering 1302 found in user interface 1300 may have a labeled scale. For example, in one embodiment, the lower boundary 1306 of the lowest touch state (e.g., the touch state associated with the lowest contact pressures) may be displayed. As an option, the lower boundary of the touch space spectrum may be equivalent to the pressure activation threshold, which the user may define using, for example, user interface 1100.

[00345] In another embodiment, the upper boundary 1308 of the touch space spectrum rendering may be displayed. As an option, upper boundary 1308 may be automatically set to a value slightly higher than the lower boundary of the highest touch state, since the highest touch state is made up of all pressures above that lower boundary. In this way, the scale of the touch space spectrum rendering is not skewed due to the potentially large range of contact pressures making up the highest touch state. In yet another embodiment, the touch space spectrum rendering may change in scale due to user interaction, with upper boundary 1308 being automatically updated.

[00346] In various embodiments, the touch state dividers 1304 found in the user interface 1300 may possess touch state divider handles 1310 with which a user may adjust the partitioning of touch states. For example, in one embodiment, a user may touch and drag a touch state divider handle to change the value of the associated divider. In another embodiment, a user may select a touch state divider handle; after the touch state divider handle has been selected, the divider may be assigned a value equivalent to whatever contact pressure level the user exerts for a predefined amount of time. As a specific example, a user may select a touch state divider handle and then press on an interaction surface. Once the desired contact pressure level is reached, the user maintains the pressure for 3 seconds, after which the value of the touch state divider is updated.

[00347] In one embodiment, the user interface 1300 may include a contact pressure gauge 1312 which reports the contact pressure level currently being exerted, to assist the user in selecting a practical partitioning of the touch state spectrum. In another embodiment, the scale of the contact pressure gauge may match that of touch state spectrum rendering 1302. As an option, the scale of both contact pressure gauge 1312 and touch state spectrum rendering 1302 may be set to accommodate the larger of two values: the current contact pressure level, or a value slightly higher than the lower boundary of the highest touch state.

[00348] In various embodiments, the touch state dividers 1304 found in the user interface 1300 may each be associated with a plurality of icon buttons 1314 which a user may use to lock a touch state divider at a particular value. In one embodiment, adjusting one touch state divider may cause all other unlocked dividers to shift such that the remaining portions of the touch state spectrum are partitioned as evenly as possible. As an option, the user interface 1300 may include a button to unlock all touch state dividers. In another embodiment, the user interface 1300 may include a button 1316 which distributes all unlocked touch state dividers evenly throughout the remaining parts of the touch state spectrum.

[00349] In one embodiment, the user interface 1300 may include a button 1318 which allows the user to establish the highest touch state boundary through pressure-based user input. In another embodiment, the user may be prompted to establish this touch state boundary as soon as user interface 1300 is displayed, in accordance with method 1200. In one embodiment, the user may only specify the highest touch state, with the remaining touch state spectrum being evenly partitioned across the touch states.

[00350] In one embodiment, the user interface 1300 may include a button 1320 which resets all touch state boundaries to default values. In another embodiment, the highest touch state boundary may be

preserved, only able to be reset within the interface used to define it that may be displayed in response to activating button 1318.

[00351] In various embodiments, the user interface 1300 may include a button 1322 which allows a user to test the currently defined touch states. For example, in one embodiment, a user may be asked to achieve various touch states, and maintain them for a certain period of time. In another embodiment, the user may be presented with an interface similar to 1300, but where the touch state spectrum rendering 1302 and the contact pressure gauge 1312 are more predominantly displayed. As an option, a sound may be played every time a touch state boundary is crossed.

[00352] Figure 14 shows a user interface 1400 for indicating that a backtouch and/or pressure-sensitive interface is activated, in accordance with one embodiment. As an option, the user interface 1400 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 1400 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00353] In one embodiment, the user interface 1400 may include one or more icons 1402 to indicate that a backtouch and/or pressure-sensitive interface has been activated. As an option, the icons may also indicate whether an interface is enabled. For example, an icon may only be visible if the interface is enabled, and only in color if the interface is activated. In another embodiment, the icons may have a color which depends upon the contact pressure level currently being exerted on that particular interface.

[00354] In various embodiments, the user interface 1400 may include a status bar 1404 which provides the user feedback regarding various device functions, in addition to other information, such as the date and/or time. The status bar itself may be used to indicate whether a backtouch and/or pressure-sensitive interface has been activated. For example, in one embodiment, the status bar may have a shading color which depends upon the contact pressure level currently being exerted on an activated interface. This may be done in conjunction with displaying an icon 1402 to indicate which interface has been activated. In another embodiment, the change in color may be restricted to just the border 1406 of the status bar. In yet another embodiment, the type of interface which has been activated may be indicated through an animation routine, including, but not limited to, a pulsing of the border, a cyclical variation of transparency of the status bar shading, "marching ants" along the status bar border, and/or any other animation routine.

[00355] In one embodiment, the status bar 1404 within the user interface 1400 may include one or more items of textual information 1408. The items of textual information may include, but are not limited to, date, time, network type, battery level, other device or application status information, and/or any other type of textual information.

[00356] In one embodiment, the activation of a backtouch and/or pressure-sensitive interface may be indicated through the presentation properties of the textual information 1408. Presentation properties for textual information which may be altered to indicate the activation of an interface include, but are not limited to, font, style, size, color, animation routine (e.g., flashing text, cycling colors, etc.), and/or any other type of

presentation property. In another embodiment, activation of a backtouch and/or pressure-sensitive interface may be indicated by temporarily replacing textual information 1408 with a message, which may include, but is not limited to, the identity of the activated interface.

[00357] In one embodiment, the user interface 1400 may indicate the activation of a backtouch and/or pressure-sensitive interface by displaying a border 1410 around the display. As an option, border 1410 may change color depending upon the current contact pressure level.

[00358] Figure 15 shows a user interface 1500 for defining a backtouch feedback style, in accordance with one embodiment. As an option, the user interface 1500 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 1500 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00359] When interacting with a backtouch interface, it may or may not be important to provide the user with some form of feedback regarding the location and/or activity of their chosen implement of interaction. Providing interaction feedback allows the user to interact with the device using an interaction surface they may not be able to see.

[00360] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1502 which represent various types of feedback which may be provided as an implement of interaction is in proximity to the backtouch interface. The types of feedback may include, but are not limited to, visual (e.g., screen flashes, status bar icons, iconic depictions of the location of the implement, etc.), sound, vibration, and/or any other form of feedback. In another embodiment, one or more of these types of feedback may be configured by the user. For example, in one embodiment, the user may select a sound to be played whenever an implement of interaction is in proximity to the backtouch interface. In yet another embodiment, the feedback may be limited to only those instances where the proximity to the backtouch interface appears intentional, rather than incidental. As a specific example, in one embodiment, feedback might be given for a fingertip, but not for a palm which is in proximity to the backtouch interface due to the user's grip.

[00361] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1504 which represent various types of visual feedback that may indicate that an implement of interaction is in proximity to a backtouch interface. The types of visual feedback include, but are not limited to, graphical representation of probable implement location, status bar icon, screen flash, and/or any other type of visual feedback.

[00362] In various embodiments, a backtouch interface may be able to estimate the location of an implement of interaction in proximity to the backtouch interaction surface. This information can be used to provide useful feedback to the user. For example, in one embodiment, a point associated with the location may be displayed. As an option, the point may be the centroid of the area with the highest proximity value within a predefine threshold. In another embodiment, the point may be replaced or combined with an icon, shape, or symbol.

[00363] In another embodiment, the user may be provided with proximity feedback in the form of a visual representation of the proximity data received from the backtouch interface. As an option, the proximity values may be scaled such that the visual representation has the appearance of a glow, centered on the estimated location of the implement.

[00364] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1506 which represent various styles of visual proximity feedback. The styles include, but are not limited to, dynamic coloring, the feedback described in conjunction with operation 806 of method 800, and/or any other type or style of visual feedback. In the context of the present description, dynamic coloring refers to coloring which varies as a function of proximity to the backtouch interface. For example, in one embodiment, the color of the visual proximity feedback may vary between two colors which represent the least discernable proximity and the greatest proximity before contact. As an option, the colors may include a transparency factor, so the visual feedback does not obstruct display contents any more than necessary.

[00365] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1508 which represent various types of feedback which may be provided as an implement of interaction comes in contact with the backtouch interface. The types of feedback may include, but are not limited to, visual (e.g., screen flashes, status bar icons, iconic depictions of the location of the implement, etc.), sound, vibration, and/or any other form of feedback. In another embodiment, one or more of these types of feedback may be configured by the user. For example, in one embodiment, the user may select a sound to be played whenever an implement of interaction makes contact with the backtouch interface. In yet another embodiment, the feedback may be limited to only those instances where the contact with the backtouch interface is estimated to be intentional, rather than incidental. As a specific example, in one embodiment, feedback might be given for contact with a fingertip, but not for a palm which is in contact with the backtouch interface due to the user's grip.

[00366] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1510 which represent various types of visual feedback indicating contact with the backtouch interface. The types of visual feedback include, but are not limited to, graphical representations of contact location and extent (e.g., contact point, contact area, etc.), a status bar icon, screen flash, and/or any other type of visual feedback, including those described in other embodiments.

[00367] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1512 which cause the visual feedback indicating contact with the backtouch interface to fade after a set amount of time. In another embodiment, the user may specify the amount of time before fading begins, how quickly the fade occurs, and/or the limits of the fade (e.g., completely disappear, fade to 70% transparency, etc.). As an option, the fading of the visual feedback may be reversed if the implement of interaction moves beyond a preset threshold while still in contact with the backtouch interface.

[00368] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1514 which allow the user to specify the style of visual feedback associated with making contact with the backtouch

interface. The styles may include, but are not limited to, shading of a contact area, line style of the border of a contact area, animation routine, and/or any other style aspect of visual feedback, including those described in other embodiments.

[00369] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1516 which represent various types of feedback which may be provided as an implement of interaction exerts pressure on the backtouch interface. The types of feedback may include, but are not limited to, visual (e.g., screen flashes, status bar icons, iconic depictions of the contact pressure of the implement, etc.), sound, vibration, and/or any other form of feedback. In another embodiment, one or more of these types of feedback may be configured by the user. For example, in one embodiment, the user may select a sound to be played whenever an implement of interaction exceeds a predefined contact pressure level with the backtouch interface. In another embodiment, the sound may play whenever there is a change in touch state. In yet another embodiment, the feedback may be limited to only those instances where the contact pressure on the backtouch interface is estimated to be intentional, rather than incidental. As a specific example, in one embodiment, feedback might be given for a finger press, but not for a palm squeeze incidental to the user's grip.

[00370] In one embodiment, the user interface 1500 may include buttons 1518 which allow the user to specify the colors which represent the extrema of measurable contact pressure levels. As an option, the colors may be specified with a transparency value.

[00371] In one embodiment, the user interface 1500 may include a plurality of checkboxes 1520 which represent various venues for presenting visual feedback based upon the current contact pressure level. The venues for pressure-related visual feedback include, but are not limited to, an area equivalent to or based upon the contact area, the contact point, the border of the display, the status bar, and/or any other type or example of visual feedback, including those described in other embodiments.

[00372] In one embodiment, the user interface 7.002.8-00 may include a button 1522 which returns all settings defined within user interface 7.002.8-00 to predefined default values. As an option, the user may be prompted to confirm the reset before restoring the default values.

[00373] In one embodiment, the user interface 7.002.8-00 may include buttons 1524 which allow a user to save and load collections of backtouch feedback settings. As an option, the user may be prompted to confirm loading a new collection of settings before overwriting the current collection.

[00374] In one embodiment, the user interface 1500 may include a button 1526 which allows a user to test the current backtouch feedback style settings. In one embodiment, button 1526 may enable the backtouch interface (if not already enabled) and allow the user to experience the current backtouch feedback style without being able to interact with user interface 1500 through the backtouch interface. In other words, the user may be able to expose the backtouch interface to a range of proximity, contact, and pressure interactions without accidentally changing any of the settings found within 1500.

[00375] In another embodiment, button 1526 may present to the user a user interface which allows the user to experience the current backtouch feedback style settings within a variety of simulated scenarios. The

simulated scenarios may include, but are not limited to, web browsing, photo viewing, an application launcher, an eBook, word processing, and/or any other common use scenario. As an option, the simulated use scenarios may be defined such that the user is able to experience the current feedback style in a wide range of color schemes, subject matter, degrees of screen clutter, etc.

[00376] As a specific example of a backtouch feedback style collection in use, in one embodiment, a user may configure the backtouch interface through user interface 1500 such that having a finger in proximity to the backtouch interface causes a faint blue glow to appear on the display, over the location of the finger. The blue glow becomes brighter as the distance between the finger and the backtouch interface decreases, until contact is made. Upon contact, the display shows a small plus sign at the contact point and a thin "marching ants" border around the contact area. The contact area is not shaded. As the user increases contact pressure, the contact area is shaded red, which becomes more opaque as the pressure increases.

[00377] Figure 16 shows an alternative method 1600 for defining a selection made within a user interface based in part on contact pressure, in accordance with one embodiment. As an option, the method 1600 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the method 1600 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00378] As shown, it is determined if a touch event has occurred. See determination 1602.

[00379] In the context of the present description, a touch event refers to an event in which an implement of interaction comes into contact with an interaction surface. For example, in one embodiment, pressing on a pressure-sensitive backtouch interface with a finger may be a touch event. Another example may be making contact with a touch-sensitive display with a stylus.

[00380] If it is determined that a touch event has occurred, then the touch event attributes are determined. See operation 1604.

[00381] In the context of the present description, touch event attributes refer to one or more measurable aspects of the user interaction which resulted in a touch event. The measurable aspects may include, but are not limited to, touch state, contact area, contact point, contact pressure level, pressure uncertainty, touch uncertainty, and/or any other measurable aspect of user interaction.

[00382] As shown, it is determined whether the system is in a selection mode. See determination 1606.

[00383] In the context of the present description, a selection mode refers to a system state where a user may create or modify a selection in a display. In various embodiments, a selection mode may be represented by a system flag. Examples of when a system may be in a selection mode include, but are not limited to, instances where a selection already exists, instances where a user has indicated a desire to create a selection.

[00384] In various embodiments, a system may be placed in a selection mode through user input. For example, in one embodiment, the user may activate a selection mode by performing a predefined gesture on an interaction surface. In another embodiment, a user may activate a selection mode by exerting contact

pressure on an interaction surface for a sufficient amount of time, the contact pressure exceeding a predefined threshold.

[00385] If the system is in a selection mode, then a selection is created and/or modified as a function of the touch event attributes, then displayed. See operation 1608.

[00386] In one embodiment, the selection may be created, modified, and/or displayed using one or more selection functions. In another embodiment, a display function may be applied in addition to a selection function, to display the selection.

[00387] In the context of the present description, a display function refers to a function of one or more inputs which determines one or more properties of a display. Properties of a display may include, but are not limited to, color values for individual pixels, brightness of a display backlight or portions of a backlight, and/or any other properties of a display. Display functions may apply to an entire display and/or multiple displays.

[00388] In one embodiment, the selection may be displayed with a secondary boundary representing the uncertainty in the selection. As a specific example, there may be displayed a small, pale green tinged transparent circle to show the area that the device is certain the user selected and a surrounding pale-red tinged transparent area (a secondary boundary) representing the area where the device thinks the user may have tried to select, but is not certain.

[00389] Operation 1608 may continue to be performed, updating the selection with each iteration, until there is a change in the touch state. See determination 1614.

[00390] If it is determined in 1606 that the system is not in a selection mode, then it is determined if a gesture has been detected. See determination 1610. In one embodiment, a user may be given feedback when a gesture is detected. Possible feedback may include, but is not limited to, sound, flashing display, appearance of an icon, a colored border on the display, and/or any other form of user feedback.

[00391] If a gesture has been detected, then an associated action is performed. See operation 1612. In one embodiment, any gesture may be mapped to any command or operation of the device. In another embodiment, a user may be provided feedback when the action is performed. Possible feedback may include, but is not limited to, sound, flashing display, appearance of an icon, a colored border on the display, and/or any other form of user feedback.

[00392] A gesture may be associated with a variety of different actions. These actions may include, but are not limited to, scrolling a display or user interface element, zooming in or out, modifying the display brightness, and/or any other action. With respect to making or modifying a selection through method 1600, it is important to note that, in one embodiment, a gesture may be associated with placing the system in a selection mode.

[00393]

[00394] Figure 17 shows a user interface 1700 for performing operations on a selection, in accordance with one embodiment. As an option, the user interface 1700 may be implemented in the context of the

architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 1700 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00395] After selecting an object, using methods, interfaces, and embodiments described above or others, a user may wish to perform an operation upon the object. Providing easily accessible methods to perform operations on a selected object may enhance the user experience. The availability of multiple interaction surfaces and/or multiple sensitivities increases the number of simple, intuitive ways a user may interact with the device.

[00396] In various embodiments, once a selection is static, a user may perform operations on the selected object. Possible operations include, but are not limited to, replication operations (i.e. copy, cut, paste, etc.), relocation operations, text-specific operations, image-specific operations, cross-application operations, and/or any other type of operation.

[00397] In various embodiments, a user may perform replication operations on a selected object through simple gestures and other types of user input. For example, in one embodiment, a user may copy a selected object to a clipboard (i.e. temporary storage, etc.) by pressing sharply on a pressure-sensitive front interaction surface, on top of the selected object. In another embodiment, a user may cut a selected object by pinching the object (i.e. applying contact pressure on the object through a front and back interaction surface), then applying greater contact pressure on the front interaction surface than the back interaction surface. In yet another embodiment, a user may perform a paste operation, replacing the selected object with the contents of a clipboard, by pinching the selected object, then applying greater contact pressure on the back interaction surface than the front interaction surface. Of course, in other embodiments, these operations and those following may be assigned to any other gesture, depending upon the location, number, and sensing ability of the host device's interaction surface(s).

[00398] In various embodiments, a user may perform relocation operations on a selected object through simple gestures and other types of user input. For example, in one embodiment, a user may move a selected object by making contact with the object on an interaction surface (front or back) and dragging the contact point to relocate the object. As an option, if the selection was made within a sequential or ordered environment (i.e. word processing document, etc.), the selected object may become transparent or translucent while being relocated, so the user may better see the insertion point (i.e. cursor, etc.). As shown in this example, the same dragging gesture may have different effects, depending on the state of the selection (i.e. static vs. active, etc.).

[00399] In various embodiments, a user may perform text-specific operations on a selected text object using simple gestures and other types of user input. See, for example, user interface 1700 in Figure 17. As shown, a selection 1702 has been made within a block of text 1704. In accordance with one embodiment, a user has temporarily magnified the selected text by bringing a finger into proximity to a back interaction

surface, said proximity localized in an area 1706 on the selection. As an option, the degree of magnification may increase as the finger is brought closer to the interaction surface.

[00400] Another example of a text-specific operation is data detection, in accordance with one embodiment. For example, in one embodiment, a user may perform a data detection operation on a selected text object by pressing on the selection with two fingers through a back interaction surface. In various embodiments, the data detection operation may highlight detectable information found within the selected text including, but not limited to, email addresses, phone numbers, dates and times, addresses, web addresses, and/or any other form of information. In another embodiment, the data detection may only highlight types of information which may be further acted upon by the device, such that after detection, a user may initiation further action by touching the highlighted information. For example, in one embodiment, touching a highlighted phone number may dial the number, touching a highlighted address may activate a navigation application, touching a date may create an appointment in a calendar application, and so forth.

[00401] Other examples of text-specific operations may include, but are not limited to, highlighting, modifying the style (i.e. bold, italic, underline, strikethrough, color, shadow, etc.), modifying the font, modifying the font size, translating to a different language, and/or any other operation which may be performed on text. In one embodiment, a user may perform a gesture, such as a two finger, double press on the selected text, to bring up a menu of different text operations (or any other operation in the present description). In another embodiment, each operation may be assigned a different gesture.

[00402] In various embodiments, a user may perform image-specific operations on a selected object through simple gestures intuitively related to the operation being performed. For example, in one embodiment, a user may apply facial recognition and/or red eye removal by simply tapping (on a front or back interaction surface) on peoples faces within the selection. In another embodiment, a user may resize the selected object using the two finger pinch-to-zoom gesture. In still another embodiment, a user may rotate the selected object by making two points of contact on the object, then twisting the contacting hand. In yet another embodiment, a user may warp or distort a selected object by applying different levels of contact pressure to the selection via a front or back interaction surface. As an option, a front interaction may cause puckering, while a back interaction may cause bulging.

[00403] In various embodiments, a user may perform cross-application operations on a selected object through simple gestures. Cross-application operations may include, but are not limited to, placing the selected object in a new email or SMS message, placing the selected object in a social network posting, sending the object to an application capable of performing further operations (i.e. image editing application, word processing application, etc.), and/or any other operation which may involve another application. In other embodiments, a user may be presented with application-specific operations in a menu, in addition to cross-application operations, upon performing a predefined gesture.

[00404] Figure 18 shows a method 1800 for utilizing contact pressure-based gestures, in accordance with one embodiment. As an option, the method 1800 may be implemented in the context of the architecture and

environment of the previous Figures or any subsequent Figure(s). Of course, however, the method 1800 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00405] As shown, it is determined if a touch event has occurred. See determination 1802.

[00406] If it is determined that a touch event has occurred, then the initial touch event attributes are determined. See operation 1804.

[00407] As shown, the gesture is identified from gesture input. See operation 1806.

[00408] In the context of the present description, gesture input refers to the collection of inputs, flags, and signals by which a gesture is identified and parameterized. For example, in one embodiment, a two-finger pinch gesture may be identified by two contact points combined with their motion with respect to each other, and parameterized by the extent of the motion. Possible gesture inputs may include, but are not limited to, touch event attributes (both initial and over time), system and/or application flags, switches, buttons, states, sensor data, and/or any other possible input.

[00409] For example, in one embodiment, a gesture may be made up of one or more contact points on an interaction surface, each associated with a different contact pressure level.

[00410] In various embodiments, a gesture may be identified from gesture input. Some gestures may be able to be identified solely from initial touch event attributes. Other gestures may only be identified after the gesture has been performed for some period of time. As a specific example, a two finger pinch gesture and a two finger swipe are indistinguishable based solely on initial touch event attributes. However, once the swipe or pinch motion has begun, the gestures are immediately distinguished from each other.

[00411] In various embodiments, gestures may include one or more contact pressures being exerted upon an interaction surface. In some embodiments, pressure may be used to distinguish between two gestures. For example, in one embodiment, two gestures involving a two finger pinch on the front display and one finger contact with the backtouch interface may be defined based on the contact pressure level exerted on the back touch interface. In other embodiments, pressure may be used to specify one or more dimensions of the operation linked to a gesture. For example, in one embodiment, a swipe gesture to control scrolling of a text field may use contact pressure to determine the speed of the scrolling (e.g., higher pressure yields faster scrolling, etc.). In still other embodiments, contact pressure may be used to both identify as well as parameterize a gesture.

[00412] Once the gesture has been identified, the corresponding operation is performed. See operation 1808.

[00413] In various embodiments, a gesture may be associated with the modification of one or more device audio settings. For example, in one embodiment, a user may adjust the device volume by applying contact pressure to a back interaction surface, and dragging the contact point up and down to increase or decrease the device volume. As an option, the ringer volume may be adjusted by dragging left and right. In another embodiment, a user may change where audio is sent (i.e. internal speakers, headphone jack, Bluetooth device,

etc.) by quickly pressing twice on a back interaction surface, then selecting an audio destination from a pop-up menu presented in response to the rapid double press. In yet another embodiment, a user may mute the audio by applying pressure on front and back interaction surfaces (i.e. a pinching motion), in a predefined corner of the device. In various embodiments, some or all of these device audio related operations may be available through gesture only after the user provides some form of activation input (i.e. touching an icon in the status bar, performing a simple gesture, etc.). In this way, gesture collisions (i.e. assignment of more than one operation to the same gesture, etc.) may be avoided. Of course, these and the following operations may be associated with any gesture or other user input, in various embodiments.

[00414] In various embodiments, a gesture may be associated with the modification of one or more display attributes. For example, in one embodiment, a user may adjust the intensity of a display backlight by applying contact pressure with three fingers on the display of interest. As an option, the backlight intensity may vary as a function of average contact pressure among the three contacts. In another embodiment, a user may activate a "night mode" (i.e. use of a monochrome red/black color space, inverting the display, etc.) by sequentially applying and releasing contact pressure on each corner of a front interaction surface. In various embodiments, some or all of these display attribute related operations may be available through gesture only after the user provides some form of activation input (i.e. touching an icon in the status bar, performing a simple gesture, etc.). In this way, gesture collisions (i.e. assignment of more than one operation to the same gesture, etc.) may be avoided.

[00415] In various embodiments, a gesture may be associated with the modification of one or more device attributes. For example, in various embodiments, a device may have a status bar along one side of a display which indicates the status of device hardware including, but not limited to, Wi-Fi signal strength, cellular network type and signal strength, Bluetooth status (i.e. on, off, etc.), system volume, battery remaining, etc. In some embodiments, a user may modify the status of these device attributes by interacting with status bar icons. For example, in one embodiment, a user may apply front surface contact pressure, above a predefined threshold for a predefined amount of time, to a status bar icon to turn off the associated device hardware (i.e. Wi-Fi, cellular modem, Bluetooth, etc.). In another embodiment, a user may apply similar pressure via a back interaction surface to a deactivated status bar icon to turn the associated hardware back on. As an option, applying said contact pressure may present the user with a menu of options associated with that device hardware (i.e. Wi-Fi networks to join, Bluetooth devices to pair, activate cellular voice/data/both, etc.).

[00416] In yet another embodiment, a user may apply contact pressure to a status bar battery indicator icon to activate a menu populated with one or more predefined collections of settings for various power scenarios (i.e. extreme cutbacks for low battery, high performance for charged battery, maximum performance while charging, etc.). In this way, a user may activate a power saving mode that allows them to stay connected to a Wi-Fi network while saving power by diming the display (i.e. while web browsing), and a different power saving mode which turns off Wi-Fi without having to dim the display as much (i.e. reading an eBook, etc.).

[00417] In various embodiments, some or all of these device attribute related operations may be available through gesture only after the user provides some form of activation input (i.e. touching an icon in the status bar, performing a simple gesture, etc.). In this way, gesture collisions (i.e. assignment of more than one operation to the same gesture, etc.) may be avoided.

[00418] In various embodiments, a gesture may be associated with application-specific operations. For example, in some embodiments, a user may interact with an email client through multiple interaction surfaces. In one embodiment, a user may scroll through a list of messages and select one for viewing using a back interaction surface. In another embodiment, a user may apply a contact pressure on a back interaction surface, then swipe downward, to forward the current message. In yet another embodiment, a user may apply a contact pressure on a back interaction surface, then swipe upward, to reply to the current message. As an option, a user may perform this gesture using two fingers to reply to all recipients of the message.

[00419] In other embodiments, a user may interact with a web browser through multiple interaction surfaces. In one embodiment, for example, a user may apply contact pressure on a link within a webpage, then perform a quick flicking gesture, in any direction, to open the link in a background tab or window. In another embodiment, a user may open a link in a new tab or window by pressing on the link through a back interaction surface for a predetermined amount of time.

[00420] In still other embodiments, a user may interact with a camera application through multiple interaction surfaces. For example, in one embodiment, a user may indicate a point to be used for white balancing by making contact with the displayed point through a back interaction surface. In another embodiment, a user may adjust one or more camera properties by applying different amounts of contact pressure on an icon shown on the front display. Possible camera properties may include, but are not limited to, aperture settings, simulated film speed, f-stop, degree of fill flash, and/or any other camera property or setting.

[00421] In even more embodiments, a user may interact with a movie player through a back interaction surface. For example, in one embodiment, a menu may fade into view when a user applies a contact pressure on the back interaction surface. The menu may allow the user to perform one or more movie-related operations, including but not limited to, toggling subtitles, selecting an audio track, selecting a chapter or bookmark, and/or any other movie related operation or setting.

[00422] In other embodiments, a user may interact with a navigation application using a back interaction surface. For example, in one embodiment, a user may cycle through a plurality of map layers by applying different levels of contact pressure on the back interaction surface. Possible map layers may include, but are not limited to, satellite images, street maps, weather maps, traffic maps, points of interest, navigational route, and/or any other type of map or navigational information.

[00423] In various embodiments, some or all of these application-specific operations may be available through gesture only after the user provides some form of activation input (i.e. touching an icon in the status

bar, performing a simple gesture, etc.). In this way, gesture collisions (i.e. assignment of more than one operation to the same gesture, etc.) may be avoided.

[00424] In various embodiments, gestures may be associated with operations that are carried out as functions of the gesture input, when the gesture is performed and identified.

[00425] In various embodiments, the operations associated with a gesture may be carried out as a function of the associated gesture dynamics. In the context of the present description, gesture dynamics are aspects of a gesture that may vary without changing the identity of the gesture. Possible aspects may include, but are not limited to, contact point velocity, contact point acceleration, contact pressure velocity, contact pressure acceleration, time to complete gesture, and/or any other aspect which may be associated with a gesture.

[00426] In various embodiments, the association between gesture and operation may be context-dependent. In some embodiments, the association depends on application context (e.g., which application is active, etc.). For example, in one embodiment, a gesture which scrolls a text field in one application may turn a page when performed in a different application.

[00427] In other embodiments, the association may depend on application or state context (e.g., whether or not there is an active selection, whether or not a control has been activated, etc.). For example, in one embodiment, a gesture which may be used to select text may move text if performed when text has already been selected.

[00428] In other embodiments, the association may be independent of context, such that performing the gesture may cause the same operation to be carried out, regardless of what application is active. For example, a gesture which brings up an interface to adjust screen brightness and volume may be defined such that it is always available.

[00429] In various embodiments, a user may be given feedback as a gesture is performed. For example, in one embodiment, a representation of the gesture may be temporarily displayed as the gesture is performed. In this way, a user may be more aware of the form of the gesture they are performing. As an option, the geometry of the displayed gesture may be smoothed or otherwise modified.

[00430] Figure 19 shows an exemplary contact pressure-based gesture 1900 for scrolling a text field, in accordance with one embodiment. As an option, the gesture 1900 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the gesture 1900 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00431] In one embodiment of a pressure-based gesture, the display properties of one or more display(s) may be altered by the gesture, including the scroll speeds of one or more scrollable objects (e.g., text fields, images, cover art, etc.). Scrolling is a common operation, and is often assigned to a gesture in touch-based devices.

[00432] In one embodiment of a pressure-based gesture, one or more inputs may alter the scrolling speeds of one or more areas on the display. As a specific example, a user may wish to scroll quickly through a very

large collection of objects (e.g., contact names, pages of text, photographs, etc.), and desires to control the speed of scrolling in a simple fashion. While performing a classic swipe gesture to scroll through the collection, the user may also apply increasing contact pressure to a pressure-sensitive surface as a means of controlling the scroll speed (e.g., increased contact pressure yields increased scroll speed, etc.). A swipe, slide or other simple gesture may be used.

[00433] See, for example, exemplary pressure-based gesture 1900. As shown, the gesture starts at touch event 1902, which involves a single finger is making contact at location L1, at time T1, while exerting contact pressure P1, in accordance with one embodiment. The gesture ends at touch event 1904, with touch event attributes L2, T2, and P2. In one embodiment, the sliding motion from L1 to L2 may be described as a swipe gesture.

[00434] As shown in plot 1906, as the contact pressure increases from P1 to P2, the scroll speed increases as well, from S1 to S2. In one embodiment, scroll speed may be a display function (in this case, a function of contact pressure). As an option, pressure-dependent display functions may be step-wise, changing in response to changes in discrete touch states, or continuous functions of a contact pressure level.

[00435] In various embodiments, pressure-based gestures may be classified as either dynamic gestures or static gestures. In the context of the present description, a dynamic gesture is a gesture that requires movement across or in proximity to an interaction surface. For example, in one embodiment, a swipe gesture may be classified as a dynamic gesture.

[00436] In the context of the present description, a static gesture refers to a gesture which does not involve movement across or in proximity to an interaction surface. Examples of static gestures may include, but are not limited to, button presses (real or virtual), multi-finger taps, operating a mechanical switch, a squeeze, and/or any other gesture which does not require motion.

[00437] In one embodiment of a pressure-based gesture that alters display properties, a scroll speed display function may be defined such that scroll speed increases in a non-linear fashion with respect to the contact pressure exerted in a swipe gesture.

[00438] In various embodiments, pressure-based gestures may be associated with different operations. For example, in one embodiment, pressure-based gestures may alter one or more display properties. Display properties may include, but are not limited to, backlight intensity, pixel color, scroll bar sensitivity, slideshow rate, and/or any other property associated with a display or its contents. As a specific example, a device may be in a sleep mode with the display and backlight inactive. A user may move his finger into proximity of a backtouch sensor in order to activate the display and the display backlight intensity to a low intensity level. By increasing the pressure on the backtouch sensor, the backlight intensity may be increased. Alternatively, the backlight intensity may be initially activated at a high level (e.g., depending on ambient light sensor etc.). In this case increasing pressure on the backtouch display may dim the backlight.

[00439] In one embodiment of a pressure-based gesture that alters a scroll speed, as the gesture magnitude is increased, the rate of scroll speed increase is increased. In other words, the scroll acceleration is increased.

[00440] In the context of the present description, gesture magnitude refers to the magnitude of the associated gesture dynamics. For example, in one embodiment, the gesture magnitude of a swipe gesture may include the length of the swipe and/or the contact pressure exerted during the swipe.

[00441] In one embodiment of a pressure-based gesture to control scroll acceleration, the scroll acceleration may depend on the gesture acceleration. Thus, if the contact is such that the contact point is accelerating with time (e.g., positive contact point acceleration), the scroll acceleration may be positive. In another embodiment, if the contact point acceleration is negative then the scroll acceleration may be negative (e.g., scroll speed decreased, etc.).

[00442] In one embodiment of a pressure-based gesture to control scroll acceleration, the scroll acceleration may be both positive and negative, depending on the contact point movement.

[00443] In one embodiment of a pressure-based gesture to control scroll acceleration, other display functions may also be altered. Possible display functions include, but are not limited to, selection(s), color, shape, image and/or text magnification, indicator(s) to provide feedback to user, and/or any other display function.

[00444] The addition of pressure dependence to already established touch gestures may facilitate user interactions with the device. Often, the efficacy of a gesture is limited by the size of the device. For example, on a device which uses the pinch-to-zoom gesture, zooming far in or out may require repetition of the gesture multiple times, due to screen size.

[00445] In one embodiment, the pinch-to-zoom touch gesture may be enhanced as a pressure-based gesture; after performing the pinch motion, the user exerts pressure on the two contact points. So long as the pressure remains above a predefined threshold, the zoom operation may continue inward/outward without requiring additional pinch motions. As an option, the speed of the zooming may be modified by changing the contact pressure level. As another option, any differences in contact pressure level between the two contact points may be dealt with by using the average pressure.

[00446] In another embodiment, the swipe to scroll touch gesture may be enhanced as a pressure-based gesture; after performing the swipe, the user exerts pressure on the contact point without further motion. So long as the pressure remains above a predefined threshold, the scroll operation may continue without requiring additional swiping motions. As an option, the scroll speed may vary as a function of the contact pressure level.

[00447] Figure 20 shows an exemplary multitouch pressure gesture 2000 for indicating a direction, in accordance with one embodiment. As an option, the gesture 2000 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the gesture 2000 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00448] As previously discussed, touch gestures may sometimes be modified to be pressure-dependent. In various embodiments, multitouch gestures may also be modified to depend upon pressure. As an option,

the modified multitouch gestures may depend upon contact pressure differences between different contact points. In the context of the present description, a multitouch pressure gesture refers to a multitouch gesture whose definition relies in part on differences in contact pressure between different contacts. The definition of multitouch pressure gestures may rely on a variation in pressure differences over time, but it is not required of all multitouch pressure gestures.

[00449] See, for example, multitouch pressure gesture 2000 shown in Figure 20. This static gesture is based upon two points of contact, 2002 and 2004. In various embodiments, this gesture may be used to indicate a direction. As depicted in Figure 20, this multitouch pressure gesture is indicating a left-to-right direction, in accordance with one embodiment. In other embodiments, this gesture may be associated with any other operation, function, or action.

[00450] In various embodiments, multitouch pressure gesture 2000 may be performed by first exerting a contact pressure upon contact point 2002 which exceeds a contact pressure being exerted upon contact point 2004. As an option, various embodiments may require that both of these initial contact pressures exceed a predefined threshold contact pressure level. The gesture is completed by altering the contact pressures on the two contact points such that the pressure exerted on 2004 now exceeds that being exerted on 2002. As an option, a user may be required to maintain this pressure inequality for a predefined amount of time. When this gesture is performed using two digits on the same hand, the user's hand may appear to be rocking from left to right. A right to left direction may be indicated by changing the order of the pressures. This type of multitouch pressure gesture is hereinafter referred to as a rocker pressure gesture.

[00451] In various embodiments, a rocker pressure gesture may be preferable over simply indicating a side of the device through touch or pressure because it is less likely to be accidentally performed.

[00452] In various embodiments, a rocker pressure gesture may be used to modify a selection. For example, in one embodiment, a text selection may be expanded in a particular direction by performing a rocker pressure gesture in the desired direction, and maintaining the contact pressure difference between the two contact points until the text selection is the desired size. As an option, the speed at which the selection expands may be increased/decreased by increasing/decreasing the contact pressure differential. In another embodiment, this gesture may be used to modify the shape of a selection. For example, it may be used to modify the aspect ratio of the selection boundary geometry associated with the selection.

[00453] In various embodiments, a rocker pressure gesture may be used in conjunction with a user interface adapted for the visually impaired. For example, in one embodiment, the rocker pressure gesture may be used to move a selection from one UI element (e.g., button, slider, drop down menu, etc.) to the next. When a UI element is selected, the assistive interface may speak the object name and/or magnify it such that the visually impaired user understands. In this way, a visually impaired user may operate a user interface displayed on a screen which often provides zero tactile feedback.

[00454] In various embodiments, a rocker pressure gesture may be used to facilitate interaction with the operating system. For example, in one embodiment, this gesture may be used to traverse a list of applications

running in a multi-tasking environment. In another embodiment, this gesture may be used to switch between windows in a windowed user environment. In yet another embodiment, a rocker pressure gesture may be used to increase/decrease system settings such as volume and display brightness.

[00455] In various embodiments, a rocker pressure gesture may be advantageous in an application environment. For example, in one embodiment, a rocker pressure gesture may be used to turn the pages of an electronic book, or other multipage document displayed as a book. Using a rocker pressure gesture would allow a user to hold the device with both hands while reading, thumbs in contact with the screen, without danger of accidentally triggering a page turn, nor requiring movement of hands or fingers to turn the page.

[00456] Figure 21 shows an exemplary multitouch pressure gesture 2100 for indicating a rotation, in accordance with one embodiment. As an option, the gesture 2100 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the gesture 2100 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00457] In various embodiments, multitouch gestures may enhance the user experience with the addition of pressure sensitivity. For example, in one embodiment, the measured difference in contact pressure levels among different contact points associated with a gesture may determine one or more parameters associated with the gesture. As an option, the one or more parameters may vary as a function of the pressure differential. Possible parameters may include, but are not limited to, speed of transformation, direction of transformation, stringency of a color matching selection, and/or any other parameter which may be associated with any type of action, command, or operation.

[00458] In another embodiment, the presence of a pressure differential among contact points associated with a gesture may change the identity of the gesture itself. For example, see Figure 21.

[00459] As shown, multitouch pressure gesture 2100 is a static gesture based upon two points of contact, 2102 and 2104. In various embodiments, this gesture may be used to indicate a rotation. As depicted in Figure 21, this multitouch pressure gesture is indicating a clockwise rotation, in accordance with one embodiment. In other embodiments, this gesture may be associated with any operation, function, or action.

[00460] In various embodiments, multitouch pressure gesture 2100 may be performed by exerting contact pressure upon contact points 2102 and 2104 such that there is a pressure differential. For example, as seen in Figure 21, the contact pressure associated with contact point 2104 is greater than that associated with contact point 2102. As an option, various embodiments may require that both of these contact pressures exceed a predefined threshold contact pressure level. The gesture is completed by ending one or both contacts, or by performing a different gesture. As an option, a user may be required to maintain this pressure inequality for a predefined amount of time. This type of multitouch pressure gesture is hereinafter referred to as a tipping pressure gesture.

[00461] In various embodiments, a tipping pressure gesture may be used to rotate an object or element on a display. For example, in one embodiment, an image or selected portion of an image may be rotated by

performing a tipping pressure gesture. As an option, the speed of rotation may depend upon the pressure differential between the two contact points. In another embodiment, the speed of rotation may vary as a function of the distance between the two contact points.

[00462] In one embodiment, the rotation may be performed in small angular increments, continuing until the tipping pressure gesture has ended. In another embodiment, the rotation is performed in 90° increments (e.g., changing the orientation of photographs, etc.), independent of gesture length or pressure differential. In some embodiments, the rotation may be performed using one of the contact points as the axis of rotation.

[00463] In some embodiments, a tipping pressure gesture may only cause a rotation in one direction (e.g., clockwise, etc.). In other embodiments, the direction of rotation caused by a tipping pressure gesture may depend on the positions of the two contact points with respect to each other. For example, in one embodiment, if the high pressure contact point is to the right of the low pressure contact point, the rotation may be in a clockwise direction, and in a counterclockwise direction otherwise. See, for example, multitouch pressure gesture 2100. In one embodiment, the axis used to make the left/right determination may be the horizontal axis as defined by the current device orientation. In another embodiment, the horizontal axis used to make the left/right determination is defined by device geometry, and is orientation independent. In still other embodiments, the axis used to determine left/right may be independent of device geometry or orientation (e.g., display diagonal, vertical, etc.).

[00464] In various embodiments, a tipping pressure gesture may be used to interact with user interface elements. For example, in one embodiment, a tipping pressure gesture may be used to increase/decrease the value of a selected slider or scale. In another embodiment, a tipping pressure gesture may be used to cycle through options on a circular pop-up menu. In still another embodiment, a tipping pressure gesture may be used to quickly scroll through a list of items. Possible items may include, but are not limited to, email messages, songs or videos, files, photos, and/or any other object or data.

[00465] In some embodiments, there may exist two or more gestures which are the same or similar in execution. For example, see multitouch pressure gestures 2000 and 2100. While performing a tipping pressure gesture, if a user allows the contact pressure differential to switch sign (i.e. low pressure contact point becomes the high pressure contact point, and visa versa), a rocker pressure gesture may be recognized by the device. In various embodiments, constraints may be placed upon gestures to assist the operating system in differentiating between similar gestures.

[00466] In various embodiments, similar or identical gestures may be distinguished from each other through the context of their use. For example, in one embodiment, the recognition of a tipping pressure gesture may be limited to instances where there is a rotatable object selected; the rocker pressure gesture would be available in all other instances. By ensuring similar gestures are not recognizable in the same context, user confusion and erroneous gestures may be reduced. These contexts may include, but are not limited to, selection status, device state, active application, system flags, selection subject matter, and/or any other property or attribute by which contexts may be defined.

[00467] In various embodiments, similar or identical gestures may be distinguished from each other by the positions of points of interaction, relative to a common axis system. In the context of the present description, a point of interaction refers to any point on an interaction surface where user interaction may be localized. Points of interaction include, but are not limited to, contact points, localized proximity and/or any other localized user interaction.

[00468] In the context of the present description, a common axis system refers to an axis system upon which all gesture data may be evaluated. For example, in one embodiment, the common axis system may be tied to the device geometry (i.e. the "horizontal" axis is always parallel to the long edge of the main display, etc.). In another embodiment, the common axis system may be tied to device orientation, such that the axis system changes depending on accelerometer data (though it is still common to all gestures).

[00469] Using a common axis system, an examination of the relative positions of points of interaction associated with a gesture may facilitate differentiation. For example, in one embodiment, rocker pressure gestures may only be recognized if a line between the two contact points is within a predefined deviation from the common horizontal axis (and the tipping pressure gesture available in all other cases). In another embodiment, the similar gestures may all be available at all times, but the location of points of interaction with respect to the common axis system may be used to give priority to certain gestures over others in certain situations.

[00470] In various embodiments, similar or identical gestures may be distinguished from each other through the timing associated with their execution. For example, in one embodiment, the performance of a rocker pressure gesture may have to be done within a certain amount of time, otherwise it may be interpreted as multiple tipping pressure gestures. In another embodiment, a tipping pressure gesture may have to be held for a certain amount of time before being recognized, such that the beginning of a rocker pressure gesture may not be identified as a tipping pressure gesture.

[00471] In various embodiments, one or more pressure-based gestures may be combined with other multi-touch and/or pressure-based gestures, such that a user may give multiple gesture-based instructions without breaking contact with one or more interaction surfaces. For example, suppose a user finger is at 3 o'clock and a user thumb at 9 o'clock and finger and thumb are one inch apart, both on a front touchscreen. The user may slide finger and thumb further apart. In one embodiment, this may result in an increase in selection area, for example. The user may then increase finger pressure. This may result in the increased selection area being rotated.

[00472] In other embodiments, other combinations and permutations of various inputs and gestures on various surfaces and using various sensors may be used to simplify the user interface and make pressure-based gestures more intuitive. As an option, such gestures may be pre-programmed, or programmed by the user, or a combination of both.

[00473] Pattern-based gestures may be simple to perform and easy for a user to remember. For this reason, they are well suited to a number of applications. One of the most basic pattern-based gestures is the

finger press. In various embodiments, a pattern-based gesture made up of one or more fluctuations of contact pressure between a low level and a higher level at a single contact point may be associated with often used operations. For example, in one embodiment, a double press (i.e. increase then decrease contact pressure twice) may activate an interface to switch between active applications in a multitasking environment. In another embodiment, a triple press may activate a pop-up menu populated with iconic representations of the user's preferred actions, contacts, applications, and scripts. In one embodiment, these gestures may be surface agnostic. For example, the application switching interface may be activated no matter which interaction surface received the double press. In another embodiment, these gestures may be surface specific, allowing other system processes and applications to assign operations to these simple gestures without colliding with a system-wide gesture. For example, a triple press on a side surface may activate a pop-up favorites menu, while a triple press on a back surface may activate an application-specific contextual menu.

[00474] Another simple pattern-based gesture is the pinch gesture. In various embodiments, this gesture is performed by making simultaneous contact with two different interaction surfaces such a line connecting the two contact points is roughly parallel to the force vectors being applied at said points. An example is pinching a device between a finger and a thumb, the finger and thumb contacting different interaction surfaces. In another embodiment, this gesture may be pressure based. Variations on this gesture may incorporate multiple pinches (i.e. fluctuations of contact pressure between a low level and a higher level, similar to the finger presses previously described).

[00475] These simple gestures may be associated with often used operations, including but not limited to, activating device interfaces (i.e. backtouch interface, proximity sensitivity, pressure sensitivity, etc.), displaying a common system interface (i.e. application launcher, system settings, etc.), displaying a menu of user defined "favorites" (i.e. applications, contacts, songs, movies, web bookmarks, recently used documents, etc.), mute volume, and/or any other often used interface or operation. Of course, in other embodiments, these gestures may be associated with any operation, function, or interface.

[00476] Building off the previous gesture, a pinch slide gesture is an example of a pattern-based generalized gesture which combines a pinch with a sliding motion. In some embodiments, it may be described as a 1-6 gesture, though it is not limited to just front/back interaction. In various embodiments, this gesture may be performed by pinching the device, then sliding the pinch across the interaction surfaces while maintaining contact. In one embodiment, a contact pressure above a predefined threshold may also be required. This gesture mimics the tactile experience of pushing or pulling an object such as a lever or cord.

[00477] In one embodiment, a pinch slide gesture may be used to quickly move through an alphabetical list, similar to using tabs to quickly find a contact quickly in a paper address book. In another embodiment, this operation may be adopted to moving quickly through other sorted lists of items, including but not limited to song lists, application lists, eBooks, and/or any other collection of organized data. As an option, the display may invite the use of this gesture by displaying virtual tabs (i.e. the alphabet, numbers, etc.) along a side of the display where the gesture would be performed.

[00478] In another embodiment, a pinch slide gesture may be used to quickly select text. For example, in one embodiment, a selection may be initiated by pinching at the desired location. The selection may be expanded by sliding the pinch to the desired selection end. In another embodiment, this method of selection may be adapted to selecting a portion of an image or graphic (i.e. pinch at one corner of desired selection bounding box and sliding to opposite corner, etc.).

[00479] In another embodiment, a pinch slide may be used to move quickly through a large document (i.e. word processing document, web page, image, etc.). For example, in one embodiment, the user may slide a pinch up and down the device, changing the displayed portion of the document relative to the position of the pinch (i.e. the top of the device represents the start of the document, the bottom of the device represents the end, and the relative location of the pinch becomes the portion of the document displayed. In another embodiment, the pinch slide may have to be initiated at a particular location to activate this document navigation functionality. For example, a web browser may have an icon near the top of the display that activates pinch slide navigation when the gesture is initiated on the icon. This functionality may be adapted to two dimensional navigation in a large image, displaying the portion of the image represented by the relative location of the pinch.

[00480] In yet another embodiment, a pinch slide gesture may be used to display menus of common operations or applications. For example, in one embodiment, a pinch slide gesture which begins near an edge of a display and then moves inward may cause a menu or window to slide in from that edge of the display. As an option, the menu or window may remain visible until a selection is made. In another embodiment, there may be different menus or windows associated with each edge of a display. In still another embodiment, a window may be closed (i.e. slid back out of view) by using a pinch slide to pull it out a bit farther, then releasing it, similar to rolling up a window shade.

[00481] In one embodiment, a user interface may be utilized to present a context based menu for the user. In one embodiment, a user may interact with a display element by exerting contact pressure on a front interaction surface over contact area. At the same time, the user may be in contact with a back interaction surface, over contact area. In various embodiments, contextual menu may be displayed near the backtouch contact, after the user performs a predefined static gesture within contact area. The user may then select a menu item using small movements and contact pressure applied on the back interaction surface.

[00482] In one embodiment, the user interface may be utilized to provide easy, quick access to a plurality of favorite operations, applications, contacts, documents, and/or other types of objects. In various embodiments, favorites panel may be displayed in response to a gesture, the selection of a hardware or software button, voice command, accelerometer input (i.e. shaking the device, flicking the users wrist, etc.), and/or any other form of user input. In one embodiment, once favorites panel is displayed, a user may select an item using a slide pad located on the side of the device.

[00483] In one embodiment, a user may configure which items are displayed in the favorites panel. In another embodiment, the favorites panel may be automatically populated by the device, based upon factors

which may include, but are not limited to, historical usage, date of last use, frequency of use, popularity information obtained from a remote system, and/or any other factors.

[00484] In the various embodiments described above, different combinations of user input have been associated with different actions. It should be understood that the described user inputs may be associated with any action, function, operation or interface, just as the described actions may be triggered by any combination of user inputs, according to different embodiments.

[00485] In the context of the present description, a cue refers to feedback, visual or otherwise, which is provided to the user. Examples of cues include, but are not limited to, the display logic within selection functions, visual representation of contact point movement, proximity feedback, contact pressure level feedback, and/or any other form of user feedback. For example, in one embodiment, the anchor object may be highlighted (e.g., change of color, text highlight, 3D representation, flashing or other dynamic selection area behavior, etc.)

[00486] In various embodiments, cues may include 3D or pseudo-3D effects. For example, in one embodiment, the anchor object may be made to appear to be floating above a background image, using 3D cues.

[00487] In various embodiments, a cue may modify a 2D representation into a pseudo-3D representation responsive to user inputs such as device orientation. For example, in one embodiment, the shadow of an object may be adjusted according to device orientation, to provide the illusion that an object is floating above a background. In another embodiment, the pseudo-3D representation may be responsive to user focus (including, in some embodiments, user gaze).

[00488] Figure 22 shows a 3D layered user interface 2200, in accordance with one embodiment. As an option, the user interface 2200 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 2200 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00489] In the context of the present description, a 3D layered user interface refers to a user interface in which displayed objects may exist in one of a plurality of layers. For example, see Figure 22.

[00490] As shown, user interface 2200 is comprised of two layers, a front layer 2202 and a back layer 2204. These layers are depicted in a staggered arrangement, to illustrate the depth; it should be noted that in various embodiments, the layers would be aligned. Object 2206 exists in the front layer, while object 2208 exists in the back layer. In various embodiments, a user may interact with the layers separately.

[00491] In various embodiments, a 3D layered user interface may be implemented in a layered display device. In the context of the present description, a layered display device refers to a device with at least one display that is made up of a plurality of overlapping display layers, each layer able to display content independent of other layers, with all layers facing the same direction. For example, in one embodiment of a layered display device, the device may have a display made up of a transparent display located on top of a

second display, both facing forward. In another embodiment, the display layers may be separated by a non-opaque material, to enhance the layered appearance.

[00492] In another embodiment of a layered display device, the display layers may include one or more e-ink layers. In yet another embodiment, the display layers may include one or more LCD layers. In still another embodiment, the display layers may include both e-ink and LCD layers. Other embodiments may include any combination of layers embodying any display technology.

[00493] In various embodiments, a 3D layered user interface may be implemented in a device having single layer displays through the use of virtual display layers. In the context of the present description, a virtual display layer refers to a collection of display elements which have all been assigned the same apparent depth within the 3D layered user interface. In various embodiments, a 3D layered user interface may make use of multiple virtual display layers. For example, in one embodiment, a 3D layered user interface may have a virtual foreground display layer and a virtual background display layer.

[00494] Additionally, in the context of the present description, a display element refers to the region of the display allotted to an identifiable visual object. Identifiable visual objects may include, but are not limited to, digital objects (i.e. images, text boxes, UI control widgets, selections, etc.), subject matter objects (i.e. people within a photograph, letters and/or words within text, etc.), and/or any other type of identifiable visual object. When located in a virtual display layer, display elements may be referred to as 3D display elements.

[00495] In various embodiments, virtual display layers may be given the appearance of depth through the use of 3D depth cues. In the context of the present description, a 3D depth cue refers to an effect, manipulation, transformation, animation, or operation which gives a visual indication of simulated depth. For example, in one embodiment, a 3D depth cue may be a blur operation, such that layers located at successively greater depths may appear blurrier than those closer to the user. In various embodiments, one or more 3D depth cues may be used to give the appearance of depth to one or more virtual display layers. In one embodiment, different 3D depth cues may be used for different virtual display layers. In another embodiment, 3D depth cues may be used in conjunction with a 3D layered user interface implemented in a layered display device, to enhance the layered appearance.

[00496] In one embodiment, a 3D depth cue may include the addition of a shadow element to display elements located within a virtual display layer, making them to appear to float above the next virtual display layer. As an option, the location of the light source(s) casting the shadows may be based in part on data obtained from one or more cameras located on the host device.

[00497] In one embodiment, a 3D depth cue may include the addition of a depth-based fog, giving the appearance that the layers exist in an environment with a thin, uniform fog. In this way, distant objects may be "foggier" than objects close to the user.

[00498] In one embodiment, a 3D depth cue may include a depth-based apparent rate of movement. For example, in a situation where a user is swiping through multiple screens of layered content, the layers closer to the user may appear to move faster than those more distant, giving the appearance of depth.

[00499] In one embodiment, a 3D depth cue may include a time-dependent visual transformation. For example, in one embodiment, a background layer may be transformed such that it appears to be below rippling water, while the foreground layer appears to be floating on the surface. In another embodiment, the visual transformation may be static.

[00500] In one embodiment, a 3D depth cue may include animated visual elements which appear to exist in between layers. Elements may include, but are not limited to, birds or insects flying, shooting stars, tiny people walking, grass blowing in the wind, and/or any other visual element.

[00501] In one embodiment, a 3D depth cue may include moving and/or transforming display elements within a virtual display layer based upon detected user gaze and/or head position. For example, in one embodiment, display elements may be compressed and virtual display layers spread apart if the device determines the user is viewing the display from an angle, the degree of transformation varying with estimated viewing angle. In another embodiment, display elements located on different virtual display layers may be slide around within their respective layers as the user changes their angle of viewing, allowing them to "look around a corner" to see display elements that would be obscured when viewed head on.

[00502] In one embodiment, a 3D depth cue may include moving and/or transforming display elements within a virtual display layer based upon changes in device orientation detected through one or more hardware interfaces (i.e. accelerometer, tilt sensor, compass, etc.).

[00503] In one embodiment of a 3D layered user interface, the 3D cues may be implemented such that the user interface has an apparent depth equal to the thickness of the device. In another embodiment, the 3D cues may be implemented such that the user interface has an apparent depth equal to the distance between a front display and a backtouch interface.

[00504] In various embodiments, a user may interact with the layers separately. For example, in one embodiment, a front interaction surface may be used to interact with display elements in a foreground display layer, and a back interaction surface may be used to interact with display elements in a background display layer. See, for example, Figure 22.

[00505] User interface 2200 is being implemented in a device having front and back touch-sensitive interaction surfaces. As shown, a user may manipulate display element 2206, located in front layer 2202, through a gesture 2210 performed on the front interaction surface. At the same time, a user may manipulated display element 2208, located in back layer 2204, through a gesture 2212 performed on the back interaction surface. In one embodiment, the manipulation of one of these display elements may be done completely independent of the other display element.

[00506] In one embodiment of a 3D layered user interface, a front input interface may be used to move display elements on a virtual foreground display layer. In another embodiment of a 3D layered user interface, a rear input interface may be used to move display elements on a virtual background display layer.

[00507] In various embodiments, there may be display layers with which a user may not interact. For example, in one embodiment, there may be an emphasis display layer situated in front of all other display

layers. In the context of the present description, an emphasis display layer refers to a display layer (virtual or physical) which is used to provide visual emphasis to one or more display elements without providing independent means of user interaction. In other words, when a user interacts with a display element located in an emphasis display layer, they might also interact with one or more other layers. For example, in one embodiment, an emphasis display layer may be used to indicate results of a text search within a document (i.e. target words appear to float above the document, etc.). Although located on a different display layer, any text selection made by the user may incorporate text from both the emphasis display layer and the display layer housing the document. In another embodiment, an emphasis display layer may cause hyperlinks within a webpage to appear to float above the rest of the page, though still able to be selected along with non-hyperlink text.

[00508] In another embodiment, an emphasis display layer may be used to display user avatars floating above the text of a chat session; the user may not interact with the avatars. Other examples of the use of an emphasis display layer may include, but are not limited to, a status bar floating at the top of a display, pop-up volume indicators which appear when the volume is changed, icons within the status bar, and/or any other circumstance where visual emphasis is desired.

[00509] Another example of a display layer with which a user may not interact is an ambiance display layer. In the context of the present description, an ambiance display layer refers to a display layer (virtual or physical) which is used to display decorative display elements with which a user may not directly interact with. For example, in one embodiment, one or more ambiance display layers may be used to create the appearance of three-dimensional structure within the 3D layered user interface (i.e. walls, shelves, backdrop, etc.). In another embodiment, an ambiance display layer may be used to display a wallpaper or some other backdrop which is present behind the elements and controls of the user interface. In yet another embodiment, a user may customize one or more ambiance display layers through a separate user interface, but not through direct interaction.

[00510] In one embodiment of a 3D layered user interface, a rear touch input may be used to control display elements located on a virtual display layer. In another embodiment, a rear touch input may be used together with a front touch input to control one or more display elements on one or more virtual display layers.

[00511] In other embodiments of a 3D layered user interface, a user may interact with one of a plurality of layers through a back interaction surface, the layer being selected using a pressure-sensitive front interface. For example, in one embodiment, a user may select one of a plurality of display layers by applying a predefined level of contact pressure on the front interaction surface, and interact with the selected layer using a back interaction surface. As an option, 3D depth cues may be used to indicate "moving" through the display layers as the contact pressure is changed (i.e. magnifying and fading display layers as they are passed by, sharpening previously blurry display layers as they grow closer, etc.).

[00512] In one embodiment, one or more display layers associated with a 3D layered user interface may only be interacted with through coordinated user input on multiple interaction surfaces. For example, in one embodiment, a touch input on the front of the device together with a touch input on the back of the device may control the overlap between two or more virtual display layers.

[00513] In one embodiment, display elements may be assigned to virtual display layers, just as they may be assigned to physical display layers in a layered display device. In another embodiment, the process of assigning display elements to virtual display layers may be the same as the process of assigning display elements to physical display layers in a layered display device. In yet another embodiment, a 3D layered user interface may be designed such that it may take advantage of physical display layers, if present, or use virtual display layers if only single layer displays are available. It should be understood that all functionality and embodiments described with respect to virtual display layers may also be implemented in a layered display device.

[00514] In various embodiments, a 3D layered user interface for augmented reality may use 3D depth cues to visually differentiate augmenting display elements associated with physical locations near the user from those associate with distant physical locations. In one embodiment, 3D depth cues may be used to give augmenting display elements an apparent distance from the user roughly equal to the physical location with which they are associated. In another embodiment, 3D depth cues may be used to augment the video signal such that it has a three dimensional appearance.

[00515] Figure 23 shows exemplary pattern-based gestures 2300, in accordance with one embodiment. As an option, the gesture 2300 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the gesture 2300 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00516] In the context of the present description, a pattern-based gesture refers to a gesture defined, at least in part, by a path through a phase space of one or more dimensions. See, for example, the pattern-based gestures 2300.

[00517] In some embodiments, pattern-based gestures may be based upon paths through a phase space whose dimensions do not include any measure of location on an interaction surface. In other words, in these embodiments, pattern-based gestures may not depend upon the location or movement of user interaction across an interaction surface. In one embodiment, these gestures may act as gesture components, which may be combined with other gesture components to form generalized gestures which may or may not be based upon location on or movement across an interaction surface.

[00518] See, for example, the pattern-based gesture 2302, described by a phase space path which represents the time evolution of the touch state associated with a contact point located on a front interaction surface. The location of the contact point upon the interaction surface is of no importance.

[00519] Pattern-based gesture 2302 is based upon three touch state transitions. At time t1, the contact point changes from touch state s0 to s1. Similar changes of state occur at t2 and t3. In various embodiments, these touch state transitions may be represented by ordered 2-tuples. For example, the first transition may be represented as (s1, t1). The pattern-based gesture itself may be represented as an ordered sequence of state transitions. For example, pattern-based gesture 2302 may be represented as {(s1,t1),(s2,t2),(s0,t3)}.

[00520] In other embodiments, pattern-based gestures may be based upon paths through a phase space that may include one or more measures of physical location upon an interaction surface. In other words, there may exist paths through the phase space that describe motion across an interaction surface.

[00521] In various embodiments, a pattern-based gesture may be based upon paths through a phase space which does not include time as a dimension. For example, in one embodiment, a pattern-based gesture may be defined by a series of transitions between touch states, where it does not matter how long the individual touch states are maintained.

[00522] In other embodiments, a pattern-based gesture may depend upon time to the extent that the entire path through phase space may be completed within a predefined amount of time (though still independent of how much time is spent at each state along the path). In still other embodiments, the gesture may be defined, in part, by the time spent on each leg of the path through phase space.

[00523] In one embodiment, a time-independent pattern-based gesture may be combined with a dynamic touch gesture (i.e. a one finger swipe, etc.) to form a generalized gesture.

[00524] In various embodiments, a touch state may be associated with a specific contact point upon a pressure-sensitive interaction surface. In other embodiments, the device may not be able to resolve the specific source of pressure exerted upon an interaction surface; in such cases, the pressure may be represented by surface touch states. In the context of the present description, a surface touch state is a partitioning of the range of measurable pressures exerted upon a surface (similar to touch states associated with contact points, but not contact point specific).

[00525] In various embodiments, there may exist a subset of generalized gestures referred to as pattern-based generalized gestures. In the context of the present description, a pattern-based generalized gesture refers to a pattern-based gesture which includes input from multiple sources. For example, see pattern-based gesture 2306, which is represented by a path through a two-dimensional phase space.

[00526] As shown, gesture 2306 is a pattern-based generalized gesture based upon the evolution of a touch state on a front interaction surface and a back interaction surface of a device, in accordance with one embodiment. The pattern-based gesture components are 2302 and 2304.

[00527] As depicted, gesture 2306 is represented by a state transition matrix of touch states, with transitions between touch states marked by directional arrows, in accordance with one embodiment. In the context of the present description, a state transition matrix refers to an iconic depiction of a path through a phase space.

[00528] As shown, 2306 represents the phase space made up of all nine possible combinations of the three possible front and back touch states. In one embodiment, these nine combinations may be referred to as touch state points. In another embodiment, the representation may also be shown as three-dimensional, with time as the third dimension.

[00529] It should be noted that the use of descriptors such as "front" and "back" in this example are for the sake of simplicity. In various embodiments, gesture 2306 may be performed using any two surfaces on a device, even if the device does not have distinct front and back surfaces. Additionally, in other embodiments, pattern-based generalized gestures such as 2306 may include any number of additional dimensions, each describing a form of user input and/or time.

[00530] In various embodiments, a pattern-based generalized gesture may be represented as an ordered sequence of n-tuples. For example, in one embodiment, the gesture 2306 may be represented as a sequence of 2-tuples, (front touch state, back touch state). Specifically, gesture 2306 may be represented as {(s1,s0), (s2,s2),(s0,s1)}. In another embodiment, gesture 2306 may be represented as a sequence of 3-tuples, of the form (front touch state, back touch state, time).

[00531] While exemplary gesture 2306 is based on a path through a touch state phase space, pattern-based gestures may also be based upon types and sources of user input which are not broken into discrete states (i.e. contact pressure level, etc.). Additionally, in some embodiments, pattern-based gestures may be defined in terms of the relative states of input, rather than exact. For example, in one embodiment, a pattern-based gesture may be defined in terms of relative pressure. In other words, rather than require that a fixed pressure be achieved, a user may simply cause a particular change in pressure to occur. In one embodiment, such a pattern-based gesture may be defined in terms of gesture attributes, including derived input such as pressure velocity.

[00532] In various embodiments, the use of pattern-based gestures based upon relative states may be used to trigger some form of user assistance. These patterns are well suited to trigger some form of user assistance, as they may be performed and recognized in the middle of performing a different gesture. For example, in one embodiment, a pattern-based gesture defined as a rapid 20% decrease and increase of contact pressure of any contact, done three times, may present to the user an interface providing help specific to what the user was doing at the time. Possible contexts include, but are not limited to, providing a list of possible gestures when help is requested during performance of a gesture, application help or manual depending on what application is active, a detailed explanation of a user interface control which was being selected when help was requested, and/or any other scenario where a user is operating the device.

[00533] In some embodiments, pattern-based gestures may be recognized in the form of an ordered sequence of tuples using a decision tree. The use of a decision tree, or similar form of logic, has the advantage of being computationally inexpensive. This method may be more appropriate for pattern-based gestures which are represented by paths through an easily enumerated phase space. For example, this method

of gesture recognition may be more appropriate for a gesture like 2306 than a similar gesture based upon contact pressure levels, rather than touch states.

[00534] In other embodiments, the pattern-based gestures may be recognized using pattern recognition or pattern matching. For example, in one embodiment, pattern-based gestures may be recognized using the methods, or similar methods, as those used to determine a gesture shape in a gesture component. In various embodiments, the pattern-matching algorithms and methods may search for a match within a predefined margin of error.

[00535] In one embodiment, pattern recognition or pattern matching to identify pattern-based gestures may be performed by the device. As an option, this functionality may be part of the operating system. In another embodiment, the pattern recognition or pattern matching may be performed using compute resources other than those of the device. Alternative compute resources include, but are not limited to, a similar device, computing resources on a local network, cloud computing resources, and/or any other computing resource. In yet another embodiment, the pattern recognition or pattern matching may be performed using device and/or alternative computing resources combined with help from the user.

[00536] In one embodiment, pattern recognition algorithms and methods may search for a match between input and predefined patterns, within a certain probability. In another embodiment, the pattern recognition algorithms may be probabilistic and use statistical inference to find the best pattern match for a given set of input.

[00537] In one embodiment, probabilistic pattern recognition algorithms may output a probability that the input being described by a given pattern. In one embodiment, this probability may be reported to the user, either specifically (i.e. displayed as a number or percentage, etc.) or in summary (i.e. a label, a color coded border, an icon, etc.). In another embodiment, this probability may be used to alter or modify a selection. In yet another embodiment, this probability may be used to alter or modify one or more display properties.

[00538] In various embodiments, probabilistic pattern recognition algorithms may also determine the n best matches for the given input. In one embodiment, a user may specify the value of n. In another embodiment, these best matches may be reported to the user as a list of gesture names and/or iconic representations of the gestures. As an option, the associated probabilities may be reported as well.

[00539] In another embodiment, this list of probable gestures may be displayed to the user in response to a user input, such as a gesture associated with user assistance. In yet another embodiment, this list of probable gestures may be displayed to the user if the recognition algorithms were not able to recognize a gesture with a probability above a predefined threshold. The user may be able to select the intended gesture from the list; upon selection, the associated operation may be performed. As an option, one or more aspects of the list items may depend upon the associated probability of recognition. Possible aspects may include, but are not limited to, text size, button size, color, and/or any other aspect or property that may be associated with the list.

[00540] As a specific example, in one embodiment, the user may be typing on a soft keyboard and performs a gesture. The device then determines with probability 80% the gesture corresponds to pressing the

letter W, with probability 15% the gesture corresponds to pressing Q, and with probability 5% that the user intended to press E. In this situation, the device may enlarge the W key by a large amount, enlarge the W key by a smaller amount, and enlarge the Q key by a still smaller amount.

[00541] In addition to gesture recognition, various embodiments may also perform user intent prediction. In the context of the present description, gesture prediction refers to a process of estimating user intent by assigning probabilities to candidate gestures based upon historical and real time use data. For example, in one embodiment,

[00542] In various embodiments, the process of gesture recognition may include the computation of the probability of user intent. In the context of the present description, computation of the probability of user intent refers to the process of assigning probabilities to potential user actions, inputs, and intentions, based upon historical and current use data. Examples of historical data include, but are not limited to, often misspelled words, actions consistently followed by a correction, utilization of particular gestures in different use scenarios, and/or any other data which may establish a use pattern.

[00543] The estimation of user intent may enhance the user experience by making the device more responsive to user input. In various embodiments, computation of the probability of user intent may facilitate the entry of text though an interaction surface. For example, in one embodiment, frequently made spelling mistakes may be automatically corrected. In another embodiment, the user may be prompted with the word determined to be most likely to be what the user is intending to type.

[00544] As an option, the user may be able to accept or decline proposed word completions or proposed spelling corrections through a pressure-based gesture. For example, in one embodiment, a user may accept or decline a proposed completion or correction with a series of taps on a backtouch interface (i.e. one tap for accept, two taps for decline), in addition to keyboard based methods. In another embodiment, a user may be presented with a plurality of possible words to be used for auto completion. As an option, these words may be ordered depending upon a probability based upon historical usage. The words may be presented to the user in a line, with one word highlighted as a selection. In another embodiment, a user may cycle through proposed words with a backtouch gesture, such as a single finger swipe in the direction the words should be cycled in. Of course, these actions may be associated with any other type of gesture, including pattern-based gestures.

[00545] In various embodiments, gesture recognition may be enhanced by computation of the probability of user intent. For example, in one embodiment, probabilities may be assigned to potential gestures based upon historical gesture usage with similar context (i.e. application, selection mode, etc.). In another embodiment, estimated user intent may give weight to certain gestures during the recognition process. In this way, the gesture recognition process may be performed more efficiently, by considering the most likely gestures early in the process.

[00546] In various embodiments, the computation of the probability of user intent may affect the user interface. In various embodiments, the user interface may adapt in response to the user's intended form of

interaction. For example, in one embodiment, upon determining that the probability that the user is performing a virtual control knob gesture has exceeded a predefined probability, and certain context requirements have been satisfied, a virtual control knob may appear for the user to interact with. In this way, the user is given visual feedback that their input is being received in the manner they intended. Examples of context requirements may include, but are not limited to, the user performing the gesture in the vicinity of a user interface object which may be controlled via a virtual control knob (i.e. slider, date, time, etc.), the virtual control knob gesture has not been reassigned to a different function by the active application, and/or any other requirement to ensure that a virtual control knob only appears when the user so intends.

[00547] Pattern-based gestures may be simple to perform and easy for a user to remember. For this reason, they are well suited to a number of applications. One of the most basic pattern-based gestures is the finger press. In various embodiments, a pattern-based gesture made up of one or more fluctuations of contact pressure between a low level and a higher level at a single contact point may be associated with often used operations. For example, in one embodiment, a double press (i.e. increase then decrease contact pressure twice) may activate an interface to switch between active applications in a multitasking environment. In another embodiment, a triple press may activate a pop-up menu populated with iconic representations of the user's preferred actions, contacts, applications, and scripts. In one embodiment, these gestures may be surface agnostic. For example, the application switching interface may be activated no matter which interaction surface received the double press. In another embodiment, these gestures may be surface specific, allowing other system processes and applications to assign operations to these simple gestures without colliding with a system-wide gesture. For example, a triple press on a side surface may activate a pop-up favorites menu, while a triple press on a back surface may activate an application-specific contextual menu.

[00548] Another simple pattern-based gesture is the pinch gesture. In various embodiments, this gesture is performed by making simultaneous contact with two different interaction surfaces such a line connecting the two contact points is roughly parallel to the force vectors being applied at said points. An example is pinching a device between a finger and a thumb, the finger and thumb contacting different interaction surfaces. In another embodiment, this gesture may be pressure based. Variations on this gesture may incorporate multiple pinches (i.e. fluctuations of contact pressure between a low level and a higher level, similar to the finger presses previously described).

[00549] These simple gestures may be associated with often used operations, including but not limited to, activating device interfaces (i.e. backtouch interface, proximity sensitivity, pressure sensitivity, etc.), displaying a common system interface (i.e. application launcher, system settings, etc.), displaying a menu of user defined "favorites" (i.e. applications, contacts, songs, movies, web bookmarks, recently used documents, etc.), mute volume, and/or any other often used interface or operation. Of course, in other embodiments, these gestures may be associated with any operation, function, or interface.

[00550] Building off the previous gesture, a pinch slide gesture is an example of a pattern-based generalized gesture which combines a pinch with a sliding motion. In some embodiments, it may be

described as a 1-6 gesture, though it is not limited to just front/back interaction. In various embodiments, this gesture may be performed by pinching the device, then sliding the pinch across the interaction surfaces while maintaining contact. In one embodiment, a contact pressure above a predefined threshold may also be required. This gesture mimics the tactile experience of pushing or pulling an object such as a lever or cord.

[00551] In one embodiment, a pinch slide gesture may be used to quickly move through an alphabetical list, similar to using tabs to quickly find a contact quickly in a paper address book. In another embodiment, this operation may be adopted to moving quickly through other sorted lists of items, including but not limited to song lists, application lists, eBooks, and/or any other collection of organized data. As an option, the display may invite the use of this gesture by displaying virtual tabs (i.e. the alphabet, numbers, etc.) along a side of the display where the gesture would be performed.

[00552] In another embodiment, a pinch slide gesture may be used to quickly select text. For example, in one embodiment, a selection may be initiated by pinching at the desired location. The selection may be expanded by sliding the pinch to the desired selection end. In another embodiment, this method of selection may be adapted to selecting a portion of an image or graphic (i.e. pinch at one corner of desired selection bounding box and sliding to opposite corner, etc.).

[00553] In another embodiment, a pinch slide may be used to move quickly through a large document (i.e. word processing document, web page, image, etc.). For example, in one embodiment, the user may slide a pinch up and down the device, changing the displayed portion of the document relative to the position of the pinch (i.e. the top of the device represents the start of the document, the bottom of the device represents the end, and the relative location of the pinch becomes the portion of the document displayed. In another embodiment, the pinch slide may have to be initiated at a particular location to activate this document navigation functionality. For example, a web browser may have an icon near the top of the display that activates pinch slide navigation when the gesture is initiated on the icon. This functionality may be adapted to two dimensional navigation in a large image, displaying the portion of the image represented by the relative location of the pinch.

[00554] In yet another embodiment, a pinch slide gesture may be used to display menus of common operations or applications. For example, in one embodiment, a pinch slide gesture which begins near an edge of a display and then moves inward may cause a menu or window to slide in from that edge of the display. As an option, the menu or window may remain visible until a selection is made. In another embodiment, there may be different menus or windows associated with each edge of a display. In still another embodiment, a window may be closed (i.e. slid back out of view) by using a pinch slide to pull it out a bit farther, then releasing it, similar to rolling up a window shade.

[00555] The pinch slide gesture is well adapted for providing input where one of a plurality of values may be chosen; it is also easily combined with a pinch gesture. For example, in one embodiment, a user may activate a system and/or ringer volume slider with a double press pinch gesture, and then select a volume by sliding the pinch up and down the device. In another embodiment, a similar operation may be performed for

backlight brightness. In yet another embodiment, a user may cycle between system volume, ringer volume, and system brightness sliders with a pinch gesture, and be able to interact with said sliders using a pinch slide. In still another embodiment, the selection of system/ringer volume or brightness may be determined by where on the device the pinch slide is being performed (i.e. left, middle, right, etc.).

[00556] A subset of pinch gestures are the side pinch gestures. In various embodiments, the side pinch gesture is performed by applying contact pressure beyond a threshold value to opposite sides of the device, the sides being those other than the front and back. As an option, the user may choose the predefined threshold value. In one embodiment, the pressure may be applied at contact points located on the sides such that a line connecting the contact points is roughly normal to the sides. In another embodiment, the side pinch gesture may also incorporate "presses" similar to the pinch and finger press gestures.

[00557] The side pinch gesture is a simple gesture well adapted for use with often used operations. For example, in one embodiment, a side pinch gesture may toggle the device mute, or activate an application launcher.

[00558] A variation on the side pinch gesture is the squeeze gesture. In various embodiments, a squeeze gesture is performed by applying contact pressure beyond a predefined threshold to one or more contact points located on opposite sides of the device. For example, in one embodiment, the gesture may be performed by holding the device in one hand, in a natural grip, and applying pressure to two opposite sides by squeezing. As an option, the squeeze gesture may incorporate "presses", similar to the finger press and pinch gestures.

[00559] The squeeze gesture is one of the easiest gestures to perform, and may be reserved for operations which are to be available system wide, independent of what application is running. In various embodiments, the squeeze gesture may be associated with commonly used operations. For example, in one embodiment, a double press squeeze gesture may be used to answer a phone call. In another embodiment, a double press squeeze gesture may be used to indicate an affirmative response to any on screen query (i.e. accept proposed auto correction, accept proposed auto completion, activate "ok" button in dialog boxes, etc.). As an option, a complementary negative response gesture may be defined as well, a gesture such as the combination of a single or double tap on the top side while squeezing the left and right sides.

[00560] In another embodiment, applying a squeeze gesture for a predefined amount of time may be associated with a delete operation, to be performed upon any selected or active object. As an option, the delete operation may be accompanied by a "crumpling paper" animation routine, as well as a prompt for user confirmation. In one embodiment, a user may not use a squeeze gesture to confirm an operation triggered by a squeeze operation (i.e. to prevent accidental implementation, etc.).

[00561] Another class of pattern-based gestures are the "no contact" pressure-based gestures. In some embodiments, the touch sensitive interaction surfaces require an implement of interaction which has a certain degree of conductivity in order to register contact. This class of gestures may be implemented in such devices, which are also pressure-sensitive. In various embodiments, the "no contact" pressure-based gestures

may be used to interact with the device in situations where direct contact is not possible (i.e. device is in case, device is in pocket, device is in purse, etc.).

[00562] In various embodiments, the "no contact" pressure-based gestures may include variations of the finger press, pinch, and squeeze gestures, in addition to others. In some embodiments, "no contact" pressure-based gestures may require that the pressures being exerted do not create a contact point (i.e. pressure is exerted, but touch contact is not registered). These gestures are well adapted to situations where contact is not feasible. For example, in one embodiment, a user may silence a ringing phone by performing a rapid, one-finger double press on an interaction surface while the device is in the user's pocket, purse, or any other flexible or semi-flexible vessel. In another embodiment, a user may perform a predefined pattern-based gesture to cause the most recently received communication (i.e. voice mail, email, SMS message, etc.) to be reported to the user through a Bluetooth audio device.

[00563] In various embodiments, gestures may be used to trigger a variety of activities.

[00564] Figure 24 shows a user interface 2400 for defining custom gestures, in accordance with one embodiment. As an option, the user interface 2400 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 2400 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00565] In various embodiments, gestures may be programmed by the user. In other embodiments, gestures may be learned by the device.

[00566] As shown, the user interface 2400 may be utilized to define a custom gesture. For example, in one embodiment, the user interface may include a gesture name and/or an iconic representation of the gesture. In another embodiment, the iconic representation may be automatically chosen by the system, depending upon defined gesture parameters. In yet another embodiment, the user interface may contain a plurality of buttons 2402 which allow a user to save, load, copy, and/or delete custom gestures. The user interface may also contain a list 2404 of all defined custom gestures. As an option, the custom gestures may be grouped by context within the list.

[00567] In various embodiments, the user interface 2400 may contain a button 2406 to allow the user to define a custom gesture. In one embodiment, selecting button 2406 may initiate a gesture recording session. In the context of the present description, a gesture recording session refers to a period of time wherein the device monitors and records all observable user and system input. In another embodiment, selecting button 2406 may present to the user an interface with instructions before initiating a gesture recording session. Instructions may include, but are not limited to, how to record the gesture, a list of all forms of input upon which a gesture may depend, how to end the recording, and/or any other information which may assist the user. In yet another embodiment, the user may be presented with a short countdown before the gesture recording session is initiated, to give the user time to prepare for the recording. As an option, the device may give some form of visual or auditory feedback to the user to indicate that the recording session has begun.

[00568] In various embodiments, a gesture recording session may be terminated by user input. For example, in one embodiment, a gesture recording session may be terminated by the user through a vocal command, recognized by the system. In another embodiment, a gesture recording session may be terminated by the user through an sound which exceeds a predefined volume. In yet another embodiment, a gesture recording session may be terminated by the user by performing a gesture. As an option, the termination gesture may be a reserved gesture.

[00569] In the context of the present description, a reserved gesture refers to a gesture which may not be reassigned by a user, application, or process. For example, in one embodiment, there may be a set of gestures, chosen for their simplicity, which are reserved for operations fundamental to the user experience (i.e. a gesture to cycle through active applications running in a multitasking environment, etc.).

[00570] In still another embodiment, a gesture recording session may be terminated automatically after a predefined amount of time has elapsed. As an option, in one embodiment the user may specify the amount of time before the recording session begins.

[00571] In one embodiment, after the termination of a gesture recording session, the user may be prompted to repeat the gesture one or more times. As an option, the user may not have to indicate when the gesture is complete after the first recording session. In another embodiment, the repeated performance of the gesture may be used to better define the gesture parameters. For example, in one embodiment, gesture aspects which do not appear in every performance of the gesture may be indicated to the user as potentially irrelevant. In another embodiment, the system may use each iteration to improve the recorded description of the gesture. For example, the system may calculate the probability of correct recognition, using methods previously discussed, after each performance. As an option, the user may be prompted to repeat the gesture until the calculated probability of correct recognition has exceeded a predefined threshold.

[00572] In various embodiments, the user interface 2400 may include a button 2408 to allow a user to view a depiction of the performance of the custom gesture as currently defined. For example, in one embodiment, selecting button 2408 may display an animated recreation of the gesture in the context of a wireframe model of the device. In another embodiment, different forms of user input may be represented by different colors (i.e. pressure is red, touch is blue, proximity is green, etc.). As an option, changes in contact pressure level may be represented by changes in the color representing pressure. In another embodiment, the device surfaces may be displayed flattened into a two dimensional plane. In still another embodiment, the gesture replay may also include one or more plots which depict the time evolution of various gesture inputs, such as contact pressure or proximity associated with individual contacts or implements of interaction.

[00573] In various embodiments, the user interface 2400 may include a list 2410 displaying all components of the currently defined gesture. For example, in one embodiment, list 2410 may be a nested hierarchical list, grouped by "expected implement of interaction" and input type (i.e. contact 1, contact 2, proximity 1, etc.). In another embodiment, list 2410 may visually indicate (i.e. italicized, colored, underlined, etc.) recorded gesture aspects which were determined to be potentially irrelevant to the gesture. In yet another

embodiment, list 2410 may break down the input from each "expected implement of interaction" into basic input categories. Categories may include, but are not limited to, pressure, touch, surface identity, proximity, proximity location, and/or any other aspect or type of user input.

[00574] The user interface 2400 may be utilized to specifically define or modify aspects of a custom gesture. For example, in one embodiment, the user interface 2400 may include a button 2412 to edit a gesture aspect selected in list 2410. In another embodiment, selecting button 2412 may present an interface to the user which may allow them to review and alter associated gesture aspects. This method of defining the gesture may not be as intuitive as teaching the system the gesture through repeated performance, but it does allow much greater control over the gesture aspects.

[00575] In one embodiment, the user interface 2400 may include a plurality of buttons 2414 which allow a user to copy, create, and delete gesture aspects associated with the current gesture. In another embodiment, the creation of a new gesture aspect may prompt the user to specify the input type to create, and with which "expected implement of interaction" it should be associated. As an option, a user may create a new "expected implement of interaction".

[00576] In one embodiment, the user interface 2400 may include a collection of check boxes 2416 which allow a user to specify the context in which the custom gesture may be performed. The contexts may include, but are not limited to, universal (i.e. available at all times), text (i.e. active text field, on-screen keyboard visible, etc.), application-specific, home (i.e. application chooser, etc.), selection (i.e. an active selection of an object exists), and/or any other type of context.

[00577] When defining a custom gesture, the associated action may be established. As shown, user interface 2400 may be utilized to specify and configure the action to be associated with the present gesture. For example, in one embodiment, the user interface may include a collection of checkboxes 2418 representing different actions which may be associated with the custom gesture.

[00578] In one embodiment, the collection of actions 2418 may include a checkbox 2420 to indicate that the gesture may trigger the insertion of a text snippet, as defined in a nearby text field. In another embodiment, the user interface may include a collection of buttons 2422 which may be used to format the text snippet. As an option, the text snippet may be defined as plain text, without formatting.

[00579] In another embodiment, the collection of actions 2418 may include a checkbox 2424 to indicate that the gesture may cause an application to launch. The user interface 2400 may also include a button which allows the user to specify which application should be launched when the gesture is performed.

[00580] In another embodiment, the collection of actions 2418 may include a checkbox 2426 to indicate that the gesture may set the system volume to a specified level. As an option, the user may be able to specify whether the gesture sets the system volume or a ringer volume. The user interface 2400 may also include a slider which allows the user to specify the volume to be associated with the present gesture.

[00581] In another embodiment, the collection of actions 2418 may include a checkbox 2428 to indicate that the gesture may trigger the creation of a new email message. In yet another embodiment, the user

interface 2400 may include a checkbox 2430 to indicate, if the gesture is performed while an object is selected, whether the selected object should be inserted into the new email message. Possible objects may include, but are not limited to, images, text, video, files, and/or any other selectable media, file, or other kind of object. In still another embodiment, the user interface 2400 may also include a checkbox 2432 to indicate that the new email message should be addressed to a particular contact. As an option, the user may be able to choose the email address from a list of the user's contacts.

[00582] In another embodiment, the collection of actions 2418 may include a checkbox 2434 to indicate that the gesture may trigger the creation of a new SMS message. In yet another embodiment, the user interface 2400 may include checkboxes 2436 and 2438 to indicate the inclusion of a selected object and/or specific destination for the message, similar to the "new email message" action previously described. As an option, if a specific recipient is not specified, the new SMS message may be directed to the most recent SMS message sender.

[00583] In another embodiment, the collection of actions 2418 may include a checkbox 2440 to indicate that the gesture may take advantage of functionality provided by third party applications. In various embodiments, developers of third party applications may be able to provide functionality hooks that may be implemented by other applications or the operating system. For example, in one embodiment, a social networking application may allow the user to associate the custom gesture with the creation of a new posting within the social network.

[00584] In other embodiments, possible actions which may be associated with a user defined gesture may include, but are not limited to, a favorite contact (i.e. gesture displays a pop-up interface with buttons representing different methods of communicating with the contact, including but not limited to telephone, email, SMS, social networks, etc.), a predefine energy saving profile, a predefined set of application preferences, and/or any often repeated activity.

[00585] The user interface 2400 may be utilized to determine whether the custom gesture may conflict with already established gestures. For example, in various embodiments, the user interface may include a list 2442 of conflicting gestures. In one embodiment, the list of conflicts may be made up of other custom gestures, as well as system defined gestures. In another embodiment, the list may also include application specific gestures.

[00586] In yet another embodiment, items in the conflict list may be formatted to indicate their severity. For example, conflicting reserved gestures may be highlighted in red, while conflicting gestures which only exist in a single application may be slightly greyed out. In various embodiments, the conflict list may be created using pattern recognition methods previously discussed, or other methods and algorithms capable of matching patterns and/or data.

[00587] The user interface 2400 may be utilized to test a custom gesture, in accordance with one embodiment. For example, in various embodiments, the user interface may include a button 2444 which presents the user with an interface which allows them to test the custom gesture as it is currently defined. In

one embodiment, the gesture testing interface may provide the user with a plurality of forms of feedback. Feedback may include, but is not limited to, current contact pressure level associated with each contact point, current touch state associated with each contact point, probability of correct gesture recognition, current gesture time, a visual representation of previous contact points, and/or any other form of user feedback.

[00588] In one embodiment, user interface 2400 may include statistics collected as a result of the gesture testing process. These statistics may include, but are not limited to, number of tests run with the current gesture configuration, average probability of correct gesture recognition, best probability of correct gesture recognition, identity of next most likely identified gesture (i.e. next closest gesture), minimum gesture performance time, maximum gesture performance time, average gesture performance time, and/or any other statistic related to the testing process.

[00589] In some embodiments, user defined gestures may be recognized in any context they were intended for. In other embodiments, a user may have to perform a predefined activation gesture before using a custom gesture.

[00590] As a specific example of how custom gestures may be utilized, in one embodiment, a user may define a gesture which is comprised of a triple finger press on a top side, followed by a singer finger swipe across a back interaction surface. The user may associate this gesture with a favorite contact. Upon performing this gesture, the user may be presented with a window showing a picture of the contact in addition to buttons linked to their telephone number and email address. In this way, communication may be established with this contact, at any time, with nothing more than a gesture and a button press.

[00591] Figure 25 shows a user interface 2500 for providing quick access to favorite operations, in accordance with one embodiment. As an option, the user interface 2500 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 2500 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00592] As shown, the user interface 2500 may be utilized to provide easy, quick access to a plurality of favorite operations, applications, contacts, documents, and/or other types of objects. In various embodiments, favorites panel 2502 may be displayed in response to a gesture, the selection of a hardware or software button, voice command, accelerometer input (i.e. shaking the device, flicking the users wrist, etc.), and/or any other form of user input. In one embodiment, once favorites panel 2502 is displayed, a user may select an item using a slide pad 2504 located on the side of the device.

[00593] In one embodiment, a user may configure which items are displayed in the favorites panel. In another embodiment, the favorites panel may be automatically populated by the device, based upon factors which may include, but are not limited to, historical usage, date of last use, frequency of use, popularity information obtained from a remote system, and/or any other factors.

[00594] Figure 26 shows a method 2600 for gesture differentiation, in accordance with one embodiment. As an option, the method 2600 may be implemented in the context of the architecture and environment of the

previous Figures or any subsequent Figure(s). Of course, however, the method 2600 may be carried out in any desired environment. It should also be noted that the aforementioned definitions may apply during the present description.

[00595] As shown, potentially gesture related input is gathered. See operation 2602.

[00596] In various embodiments, there may exist a tiered approach to interpreting user input. For example, in one embodiment, it may first be determined whether there is any meaningful user input.

[00597] In various embodiments, each form of user input may have an associated threshold above which user interaction may rise before it may be deemed meaningful. Examples of such thresholds may include, but are not limited to, minimum threshold pressure level, minimum threshold proximity level, maximum context determination zone, and/or any other threshold meant to prevent acting on unintentional user interactions.

[00598] In one embodiment, upon detecting meaningful user input, it is then determined whether it is related to a basic user interaction (i.e. button press, basic application interaction, etc.). If the meaningful user input is not related to a basic user interaction, then it may potentially be related to a gesture. In one embodiment, that determination may result in the initiation of method 2600. In another embodiment, system and environmental information may be gathered, in addition to the meaningful user input.

[00599] Once potential gesture input has been received, it is determined if the gesture is possibly a generalized gesture. See determination 2604.

[00600] A generalized gesture is a gesture that includes input from multiple sources, including but not limited to multiple interaction surfaces. In one embodiment, the possibility of a generalized gesture may be determined by ascertaining the number of sources provided the meaningful input gathered in operation 2602.

[00601] If it is determined that the gesture is possibly a generalized gesture (i.e. there is meaningful input from more than one source), then possible gesture identities are deduced using gesture attributes, gesture components, and gesture notation. See operation 2606.

[00602] In various embodiments, the identification of a generalized gesture may begin with the identification of the component gestures. Component gestures may be identified by evaluating associated gesture attributes, as has been previously discussed. In one embodiment, once the component gestures have been identified, gesture notation may be used to narrow the field of potential gestures.

[00603] In one embodiment, a generalized gesture may be identified by first identifying the faces involved, then further limiting the possibilities by identifying characteristic gesture attributes in common, until the number of potential generalized gestures is either one, or cannot be further reduced. In another embodiment, a decision tree may be used to identify the generalized gesture.

[00604] If it is determined that the gesture is not a generalized gesture (i.e. there is meaningful input from only one source), then possible gesture identities are deduced using gesture attributes. See operation 2608.

[00605] In various embodiments, the same methods used to identify component gestures in operation 2606 may be used in this operation.

[00606] As shown, it is determined if there is a single possible gesture being performed. See determination 2610. In one embodiment, if there are no potential gestures, the user may be provided feedback indicating a failure to recognize the gesture. Feedback may be visual, aural, or both.

[00607] If there is more than one possible gesture being performed, then the gesture subject matter context is used to identify the gesture. See operation 2612.

[00608] In the context of the present description, gesture subject matter context refers to any subject matter which may be related to a gesture. Examples may include, but are not limited to, selected objects, objects displayed at or near the location of the gesture, and/or any other items, objects, or properties which may give context to a gesture.

[00609] In some embodiments, similar gestures may require the use of gesture subject matter context to differentiate. For example, in one embodiment, a spin gesture and virtual control knob gesture may be indistinguishable until it is determined whether there is a displayed control knob at the contact points.

[00610] After using the gesture subject matter context to identify the gesture, it is determined whether there is a single possible gesture being performed. See determination 2614.

[00611] If there is still more than one possible gesture being performed, then a default response is performed. See operation 2616.

[00612] In one embodiment, the default response to the inability to identify the gesture may be to do nothing, and stop applying method 2600. In another embodiment, the default response may be to restart method 2600, in the hope that sufficient additional user input may have been gathered that may assist in gesture differentiation.

[00613] In yet another embodiment, the default response to the inability to identify the gesture may be to prompt the user to clarify their recent input. For example, in one embodiment, the user may be prompted by a pop-up interface which allows the user to select from identified potential gestures, or indicate that none of the candidates are correct. Since such user interaction could possibly interrupt the performance of the gesture, the user may have to repeat the gesture after making an appropriate selection.

[00614] If the identity of the gesture being performed has been determined, it is then determined whether the gesture is meant to trigger some sort of transformation. See determination 2618. Examples of possible transformations include, but are not limited to, move, slide, scale, rotate, and/or any other spatial or geometric transformation.

[00615] If the gesture is meant to trigger a transformation, then the gesture reference is determined. See operation 2620.

[00616] In various embodiments, gestures which cause a transformation to occur may have an associated gesture reference. For example, in one embodiment, a spin gesture may have a gesture reference (i.e. axis of rotation). In various embodiments, a gesture reference may be determined using the type or specific identity of the gesture and/or gesture attributes (i.e. gesture orientation, gesture shape, etc.).

[00617] As shown, the intermediate operations associated with the identified gesture are performed. See operation 2622.

[00618] In the context of the present description, an intermediate gesture operation refers to operations associated with a gesture which may be executed before the gesture is done. For example, a spin gesture which rotates a displayed object may cause rotation to occur and be displayed before the user has stopped performing the gesture. In this way, a user may receive feedback on their gesture before terminating the interaction. Not all gestures have associated intermediate operations.

[00619] In one embodiment, each execution of intermediate gesture operations may cause an update of the gesture attributes before execution begins. In this way, the feedback given to the user performing the operation is responsive to their performance.

[00620] In another embodiment, each execution of intermediate gesture operations may trigger a display update (i.e. rendering, etc.). As an option, the display update may be localized to the portions of the display affected by the gesture operations, and may be more frequent than display updates for other user interface elements.

[00621] The intermediate operations are continuously performed unless it is determined that the gesture has ended. See determination 2624.

[00622] In various embodiments, a gesture may be ended by ending one or more user inputs. For example, in one embodiment, a spin gesture may be ended by breaking contact with one or two interaction surfaces. In another embodiment, a proximity-based gesture may be ended by reducing at least one proximity below a predefined threshold. In yet another embodiment, a pressure-based gesture may be ended by reducing the contact pressure level associated with one or more contact points below a predefined threshold level.

[00623] In various embodiments, a gesture may be ended by performing a different gesture. In one embodiment, the performance of a new gesture may be detected by changes observed in one or more gesture attributes. As an option, the changes may have to exceed a predefined threshold before identification of a new gesture is attempted. In some embodiments, a gesture may not necessarily be able to end all other gestures.

[00624] Once it has been determined that the gesture has ended, the final operations associated with the identified gesture are performed. See operation 2626.

[00625] In various embodiments, gestures may be associated with one or more final operations. In the context of the present description, a final operation refers to an operation which is executed when a triggering gesture has ended. For example, in one embodiment, a gesture which triggers the display of a pop-up menu and allows a user to cycle through menu items may have as a final operation the selection of the current menu item and removal of the pop-up menu.

[00626] Figure 27 shows a 3D layered user interface 2700 having a clipboard layer, in accordance with one embodiment. As an option, the user interface 2700 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface

2700 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00627] In the context of the present description, a clipboard layer refers to a display layer in a 3D layered user interface that is used to store one or more selectable objects upon which relocation/replication operations may be performed. Relocation/replication operations may include, but are not limited to, copying, pasting, sending to specified application, inserting into a new message (i.e. email, SMS, social network posting, etc.), and/or any other operation which may be performed on a selectable object. Selectable objects may include, but are not limited to, images, text (plain, rich, hypertext, etc.), video clips, sound clips, files, and/or any other type of object.

[00628] In various embodiments, a 3D layered user interface with a clipboard layer may insert the clipboard layer immediately after the active display layer. For example, see Figure 27.

[00629] As shown, user interface 2700 is comprised of two layers, an active layer 2702 and a clipboard layer 2704. These layers are depicted in a staggered arrangement, to illustrate the depth; it should be noted that in various embodiments, the layers would be aligned. In one embodiment, user interface 2700 may include additional layers. In another embodiment, active layer 2702 may contain one or more display elements, one or more of which either is, or contains, a selectable object.

[00630] In various embodiments, an object may be selected before it may be placed on the clipboard layer. Objects may be selected using any of the methods in the present description, or any other methods or procedures for indicating a selection. In one embodiment, a screen capture may be placed on the clipboard layer without having to be selected.

[00631] Once there is an active selection, the selected object may be moved or copied to the clipboard layer. In various embodiments, the clipboard layer may be activated before an object may be moved or copied to it. In one embodiment, the clipboard layer may be activated through selecting an icon located in the status bar, or elsewhere on the display.

[00632] In various embodiments, the clipboard layer may be activated by performing a gesture. For example, in one embodiment, the clipboard layer may be activated with a 1-6 pinch slide gesture, where the user "pulls" the clipboard layer into view from one edge of the display. In various other embodiments, the clipboard layer may only be active while a gesture is being performed, with the gesture's final operation being hiding the clipboard layer. For example, in one embodiment, the clipboard layer may be activated after a squeeze gesture (i.e. a double-press squeeze gesture, etc.) is initiated, and remains active until the contact pressures fall below a threshold level, ending the gesture.

[00633] In various embodiments, an activated clipboard layer is placed directly after the active display layer (i.e. the layer which contains the selection, etc.). In various embodiments, the activation of a clipboard layer may change one or more visual properties of the active display layer. For example, in one embodiment, the active display layer may become translucent, allowing the user to see the contents of the clipboard layer. In some embodiments, the degree of translucency may be a function of a user input. For example, in one

embodiment, the active display layer may become more translucent as the user increases a contact pressure (i.e. a contact pressure associated with an activating gesture, backtouch pressure, etc.). In one embodiment, the active selection in the active display layer may be less translucent than the rest of the active display layer.

[00634] In various embodiments, once the clipboard layer is activated, objects may be copied or moved to and from the clipboard layer as a result of user input. For example, in one embodiment, an object may be cut (i.e. removed from the active display layer and placed on the clipboard layer) by performing a 1-6 pinch gesture, where the contact pressure on the front interaction surface is greater than the contact pressure on the back interaction surface. This provides the user with the sensation of pushing the selected object through the active display layer, into the clipboard layer.

[00635] In one embodiment, a selected object may be copied from the active display layer by performing a press gesture on the front interaction surface, where the user applies a contact pressure level on the selected object that exceeds a predefined threshold. See, for example, Figure 27. In another embodiment, the user may be provided with one or more visual indications that the object has been copied to the clipboard layer.

[00636] As shown in Figure 27, a user has performed a press gesture by applying sufficient contact pressure on contact area 2706, situated on selected object 2708 which is located in the active display layer 2702. The press gesture triggered a copy operation, placing a copy 2710 of the selected object to the clipboard layer 2704.

[00637] In one embodiment, a clipboard layer may only hold one object. Cutting or copying a second object may replace the first clipboard object. In another embodiment, a clipboard layer may contain multiple objects.

[00638] In one embodiment, an object may be copied from the clipboard layer and pasted into the active display layer by performing a press gesture on a back interaction surface, behind the object. This provides the user with the sensation of pushing a copy of the object up from the clipboard layer to the active display layer. As an option, the object may remain in the clipboard layer after the copy operation.

[00639] In one embodiment, an object may be cut from the clipboard layer and pasted into the active display layer by performing a 1-6 pinch gesture, where the contact pressure on the back interaction surface is greater than the contact pressure on the front interaction surface. This provides the user with the sensation of pulling the clipboard object up to the active display layer. As an option, the object may be removed from the clipboard layer after the cut operation.

[00640] In various embodiments, a clipboard layer may contain multiple objects. In one embodiment, the clipboard layer may operated as a first-in-last-out type container, such that when a user causes a new object to be placed on the clipboard layer, previous objects get incremented in order. In such an embodiment, repeated paste operations from the clipboard to the active display layer may eventually transfer all clipboard objects to the active display layer, while repeated copy operations from the clipboard to the active display layer may create multiple copies of the active clipboard object.

[00641] In the context of the present description, an active clipboard object refers to the clipboard object which is visible in an activated clipboard layer. In various embodiments, the default active clipboard object is the last object placed in the clipboard layer. In one embodiment, a user may cycle through various clipboard objects until the desired object is visible. In another embodiment, the clipboard layer may only display objects which are able to be copied or pasted into the current active display layer (i.e. a video clip may not be displayed in the clipboard layer, even though it has been copied, if the active display layer is a text-only environment).

[00642] In various embodiments, a user may remove an object from an activated clipboard layer by selecting an icon associated with deletion. See, for example, icon 2712 in Figure 27. As an option, the user may be prompted to confirm this operation before removing the object from the clipboard.

[00643] In one embodiment, the user may move all clipboard objects to the active display layer by performing a predefined gesture. In another embodiment, a user may select certain objects to always be available in the clipboard layer. Such objects may include, but are not limited to, email signatures, text snippets, emoticons, avatars, digital signatures, and/or any other often used object.

[00644] Of course, in various other embodiments, these clipboard layer actions (i.e. copy, cut, paste, etc.) may be triggered through any form of user input including, but not limited to, user interface controls, gestures, voice commands, and/or any other form of user input.

[00645] Figure 28 shows a 3D layered user interface 2800 having an operation layer, in accordance with one embodiment. As an option, the user interface 2800 may be implemented in the context of the architecture and environment of the previous Figures or any subsequent Figure(s). Of course, however, the user interface 2800 may be implemented in any desired environment. The aforementioned definitions may apply during the present description.

[00646] In the context of the present description, an operation layer refers to a display layer in a 3D layered user interface that may be used to apply operations on display elements located in display layers beneath the operation layer. Operations may include, but are not limited to, image manipulations, data detection, image recognition, OCR, movie filters, sound filters, display modifications, and/or any other type of operation which may be applied to one or more display elements, or portions thereof.

[00647] In various embodiments, a 3D layered user interface with an operation layer may insert the clipboard layer immediately above the active display layer. For example, see Figure 28.

[00648] As shown, user interface 2800 is comprised of two layers, an operation layer 2802 and one or more display layers 2804. These layers are depicted in a staggered arrangement, to illustrate the depth; it should be noted that in various embodiments, the layers would be aligned. In one embodiment, user interface 2800 may include additional layers. In another embodiment, display layer 2804 may contain one or more display elements, such as graphic 2806.

[00649] In various embodiments, an operation layer may be activated by performing a gesture. For example, in one embodiment, an operation layer may be activated with a 1-6 pinch slide gesture, where the

user "pulls" the operation layer into view from one edge of the display. In various other embodiments, an operation layer may only be active while a gesture is being performed, with the gesture's final operation being hiding the operation layer. For example, in one embodiment, the operation layer may be activated after a squeeze gesture (i.e. a triple-press squeeze gesture, etc.) is initiated, and remains active until the contact pressures fall below a threshold level, ending the gesture.

[00650] In various embodiments, an operation layer may have an operation window which defines the boundaries within which the operation may be applied. See, for example, operation window 2808 in Figure 28.

[00651] In one embodiment, a user may resize the operation window. In another embodiment, the operation window may be automatically scaled, translated, and/or reshaped to fit a display element which is in or near the user focus. In yet another embodiment, an operation layer may include a button which enlarges the operation window to fit the entire display.

[00652] In various embodiments, an operation window may be able to perform a plurality of operations. In some embodiments, operations may be divided into subject matter categories. In one embodiment, a user may select an operation by first selecting a subject matter category, then selecting an operation from a list. In various embodiments, once an operation has been selected by the user, it is applied to the contents of the operation window.

[00653] In various embodiments, possible subject matter categories may include, but are not limited to, image, text, video, audio, display, and/or any other category of subject matter. Possible image operations may include, but are not limited to, color operations (i.e. desaturate, replace color, saturate, etc.), changes in color space (i.e. grayscale, sepia, custom 2-tone space, etc.), processing effects (i.e. halftone, pixelate, posterize, etc.), distortions (i.e. twirl, warp, motion blur, etc.), enhancements (i.e. sharpen, blur, image repair, remove red eye, etc.), and/or any other possible image operation.

[00654] One example of a text operation may include data extractors. In the context of the present description, a data extractor refers to logic which parses text data, identifying information fragments which can trigger further action. For example, in one embodiment, a data extractor operation may highlight all email addresses in the text inside the operation window. As an option, touching or otherwise selecting a highlighted email address may create a new email message to that address. Other examples of information fragments may include, but are not limited to, phone numbers, contact names, dates, times, addresses, appointments, web addresses, and/or any other information fragment which may be used in a related action. Other examples of text operations may include, but are not limited to, foreign language translation, profanity removal, optical character recognition, and/or any other text operation.

[00655] In various embodiments, possible video operations may include, but are not limited to, color adjustment, resolution reduction, sound volume adjustment, text overlay, graphics overlay, and/or any other possible video operation. In one embodiment, image operations may also be applied to video.

[00656] In various embodiments, possible audio operations may include, but are not limited to, volume normalization (i.e. softening loud portions, amplifying soft portions), application of equalizer settings, audio effects (i.e. echo, envelope, reverberation, etc.), and/or any other possible audio operation. In one embodiment, audio operations may also be applied to video.

[00657] In the context of the present description, a display operation refers to an operation which affects one or more display properties for the display region delineated by the operation window. For example, in one embodiment, a display operation may include adjustment of backlight intensity within the operation window. Other possible display operations may include, but are not limited to, application of power saving backlight profiles (i.e. highlighting only areas of interest, etc.), activation/deactivation of display layer types (i.e. only using e-ink within operation window, etc.), modifying 3D depth cues within operation window, and/or any other possible display operation.

[00658] As a specific example of an operation layer in use, see Figure 28. As shown, a user has selected the "Image" subject matter category from a plurality of categories 2810, and the "Invert" operation from a plurality of operations 2812. As a result, an "Invert" operation has been applied to the contents of operation window 2808.

[00659] In one embodiment, a user may apply multiple operations within a single operation window. As an option, the operations may come from different subject matter categories. In another embodiment, certain operations may only be available if certain conditions are satisfied, such as the operation window spanning entire display.

[00660] In various embodiments, once the user has selected one or more operations, and has adjusted the operation window to their liking, they may choose to apply the operation. In one embodiment, application of the operation may be elected by selecting a button. See, for example, button 2814.

[00661] Upon application, in one embodiment, the operation may modify all the content within the operation window. In another embodiment, application of the operations may create a modified copy of the content within the operation window. In still other embodiments, the user may be prompted to choose between modifying the original and creating a copy. In one embodiment, certain operations perform non-destructive modifications, such as backlighting modifications. In another embodiment, some operations may not make permanent changes, but rather are only useful within the operation layer (i.e. certain text operations, etc.).

[00662] In one embodiment, the selected operation(s) may be cancelled and the operation layer hidden by selecting a button. See, for example, button 2816.

[00663] In various embodiments, operations may be provided by the operating system. In another embodiment, operations may also be provided by third party developers through applications. As an option, these applications may run in the background of a multitasking environment.

[00664] The various embodiments set forth herein may be implemented in a variety of devices including, but not limited to, consumer devices, phones, cell phones, internet phones, music players, video players,

cameras, social interaction devices, radios, TVs, watches, personal communication devices, electronic wallets, smart jewelry, personal computers, tablets, laptop computers, embedded systems, electronic glasses, and/or any other device that includes one or more sensors or inputs. Possible inputs may include, but are not limited to, keyboard, mouse, touchscreen(s), touchpad(s), interaction surfaces, a joystick, touchwheel, touchknob, touchbutton, touchball, trackball, scroll wheel, thumb-mouse, switch, button, wheel, knob, ball, pedal, voice recognition, audio command, audio prompt, gaze control, eye tracking, head position sensing, facial and/or gestural and/or postural expression recognition, and/or other inputs and combinations of these. Possible sensors may include, but are not limited to, range sensors, scanners, magnetometers, GPS receivers, accelerometers, cameras, depth sensors, light-field cameras, ambient light sensors, pressure sensors, infra-red (IR) sensors, UV sensors, touch and/or proximity sensor(s), grasp sensors, material sensors, chemical sensors, physical sensors, electrical sensors, biological sensors, weight sensors, force sensors, mass sensors, gas sensors, vapor sensors, particle sensors, wireless sensors, RF and other electromagnetic sensors, and/or other sensors and combinations of these.

[00665] In various embodiments, the device may include one or more different forms of displays and/or other outputs including, but not limited to, physical or other actuators, motors, tactile feedback or other tactile output, weight or mass feedback, force feedback or other force outputs, mechanical outputs, audio outputs, alarms, horns, bells, indicators, dials, meters, barcodes and/or other display patterns, vibrations, ultrasonic outputs, wireless and RF outputs, optical and light outputs, avatars, visual outputs, multiscreen displays, multilayer displays, 3D displays, holographic projections and outputs, laser displays and other laser outputs, projection systems, heads-up displays, and/or other outputs or combinations of these.

[00666] In various embodiments, the device may support one or more types of applications including, but not limited to, search applications, contacts and/or friends applications, messaging applications, telephone applications, video conferencing applications, e-mail applications, communications applications, voice recognition applications, instant messaging (IM) applications, blog and/or blogging applications, photographic applications, shopping applications, payment applications, digital camera applications, digital video camera applications, web browsing and browser applications, digital music player applications, digital video player applications, cloud applications, office productivity applications, and/or other types of applications or combinations or multiple instances of these.

[00667] In other embodiments, different applications on the device may use one or more interface devices that may be physical interface devices or virtual interface devices including, but not limited to, touchscreens, touchpads, soft inputs, hard inputs, keyboards, buttons, knobs, sliders, switches, and/or any other kind of interface device.

[00668] In various embodiments, the device may have a common physical architecture (i.e. display, touchscreen, etc.) such that the device may be used with different applications with one or more common user interfaces with one or more common properties (i.e. easy to use, simple, intuitive, transparent, etc.).

[00669] In various embodiments, user interfaces may include one or more physical interface devices (i.e. keyboard, joysticks, buttons, sliders, switches, knobs, other hard inputs, etc.) and/or one or more virtual or soft interface devices (i.e. soft keyboard, programmable buttons, UI sliders, UI knobs, check boxes, text fields, other soft inputs, etc.).

[00670] In various embodiments, the device may implement one or more types of keyboard (i.e. soft keyboard, physical keyboard, virtual keyboard, keypad, etc.). In one embodiment, the keyboard(s) may include standard keyboard arrangements (i.e. QWERTY configurations, etc.), and/or non-standard arrangements and/or symbols on the keys (i.e. soft keys, buttons, pixels, displayed icons etc.). In another embodiment, the keyboard(s) may include a reduced number of symbols (i.e. letters, icons, soft keys, etc.) compared to the number of keys on a conventional physical keyboard. In yet another embodiment, one or more alternative keyboards may make it easier for users to select one or more symbols in the keyboard, and thus, one or more corresponding representations (i.e. letter, number, special symbol, graphics, emoticon, abbreviation, slang, acronym, etc.). In still another embodiment, one or more keyboards and their associated contents and/or layouts may be modified. For example, in one embodiment, one or more displayed symbols on the keyboard may be modified in accordance with application, application state, device state, settings (i.e. language, etc.), and/or user actions.

[00671] In various embodiments, one or more keyboards may be customized to one or more applications and/or users. For example, in one embodiment, one or more keyboard embodiments may be customized to one or more users based on factors including, but not limited to, application states, stored application history, web cookies, a word usage history (i.e. lexicography, slang, individual usage, etc.), language, country, and/or any other factor. In another embodiment, one or more keyboards may be modified to reduce the probability of user error when selecting one or more keys when using the soft keyboards.

[00672] In various embodiments, the device may have multiple functions or roles including, but not limited to, telephone, video conferencing, e-mail, instant messaging, blogging, digital photography, digital video, web browsing, digital music playing, social interaction, shopping, searching, and/or any other function or role. As an option, instructions for performing the device functions may be included in a computer readable storage medium, or as a computer program product configured for execution by one or more processors.

[00673] In various optional embodiments, the features, capabilities, and/or technology, etc. of the tablets, mobile devices, computing devices, networks, hardware, and/or software, etc. disclosed in the following patents/applications may or may not be incorporated into any of the embodiments disclosed herein: US7479949; US7748634; US20060017692; US20100188268; US20110145692; US7954101; US20070103454; US20100210329; US20070091825; US20060013219; US7916166; US20090213205; US20070296805; US20100205148; US20100188473; US7441196; US7894641; US7966578; US7479949; US Provisional Application NO. 61/470,336, filed 03-31-2011, titled "SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR UTILIZING IMAGE RECOGNITION TO PERFORM AN

ACTION"; US Provisional Application NO. 61/470,391, filed 03-31-2011, titled "SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR ENABLING A PERIPHERAL DEVICE TO UTILIZE FUNCTIONALITY ASSOCIATED WITH A MOBILE DEVICE"; and US Provisional Application NO. 61/569,213, filed 12-09-2011, titled "SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR MODIFYING CONTENT." Each of the foregoing patents/applications are hereby incorporated by reference in their entirety for all purposes.

[00674] (1) U.S. patent application Ser. No. 10/188,182 (US 2003-0076306 A1), "Touch Pad For Handheld Device," filed Jul. 1, 2002; (2) U.S. patent application Ser. No. 10/722,948 (US 2005-0110768 A1), "Touch Pad For Handheld Device," filed Nov. 25, 2003; (3) U.S. patent application Ser. No. 10/643,256 (US 2005-0052425 A1), "Movable Touch Pad With Added Functionality," filed Aug. 18, 2003; (4) U.S. patent application Ser. No. 10/654,108, "Ambidextrous Mouse," filed Sep. 2, 2003; (5) U.S. patent application Ser. No. 10/840,862 (US 2006-0097991 A1), "Multipoint Touchscreen," filed May 6, 2004; (6) U.S. patent application Ser. No. 10/903,964 (US 2006-0026521 A1), "Gestures For Touch Sensitive Input Devices," filed Jul. 30, 2004; (7) U.S. patent application Ser. No. 11/038,590 (US 2006-0026535 A1), "Mode-Based Graphical User Interfaces For Touch Sensitive Input Devices" filed Jan. 18, 2005; (8) U.S. patent application Ser. No. 11/057,050 (US 2006-0181517 A1), "Display Actuator," filed Feb. 11, 2005; (9) U.S. Provisional Patent Application No. 60/658,777, "Multi-Functional Hand-Held Device," filed Mar. 4, 2005; (10) U.S. patent application Ser. No. 11/367,749 (US 2006-0197753 A1), "Multi-Functional Hand-Held Device," filed Mar. 3, 2006; and (11) U.S. patent application Ser. No. 29/281,695, "Icons, Graphical User Interfaces, and Animated Graphical User Interfaces For a Display Screen or Portion Thereof," filed Jun. 28, 2007. All of these applications are incorporated by reference herein in their entirety.

[00675] The soft keyboard embodiments may include standard (QWERTY) and/or non-standard configurations of symbols on the displayed icons of the keyboard, such as those described in U.S. patent application Ser. Nos. 11/459,606 (US 2007-0152978 A1), "Keyboards For Portable Electronic Devices," filed Jul. 24, 2006, and 11/459,615 (US 2007-0152980 A1), "Touch Screen Keyboards For Portable Electronic Devices," filed Jul. 24, 2006, the contents of which are hereby incorporated by reference in their entirety.

[00676] A quick press of the push button may disengage a lock of the touch screen or begin a process that uses gestures on the touch screen to unlock the device, as described in U.S. patent application Ser. No. 11/322,549 (US 2007-0150842 A1), "Unlocking a Device by Performing Gestures on an Unlock Image," filed Dec. 23, 2005, which is hereby incorporated by reference in its entirety.

[00677] A touch-sensitive display in some embodiments of the touch screen may be analogous to the multi-touch sensitive tablets described in the following U.S. patents: U.S. Pat. Nos. 6,323,846 (Westerman et al.), 6,570,557 (Westerman et al.), and/or 6,677,932 (Westerman), and/or U.S. Patent Publication 2002/0015024A1, each of which is hereby incorporated by reference in its entirety.

[00678] A touch-sensitive display in some embodiments of the touch screen may be as described in the following applications: (1) U.S. patent application Ser. No. 11/381,313 (US 2007-0257890 A1), "Multipoint

Touch Surface Controller," filed May 2, 2006; (2) U.S. patent application Ser. No. 10/840,862 (US 2006-0097991 A1), "Multipoint Touchscreen," filed May 6, 2004; (3) U.S. patent application Ser. No. 10/903,964 (US 2006-0026521 A1), "Gestures For Touch Sensitive Input Devices," filed Jul. 30, 2004; (4) U.S. patent application Ser. No. 11/048,264 (US 2006-0026536 A1), "Gestures For Touch Sensitive Input Devices," filed Jan. 31, 2005; (5) U.S. patent application Ser. No. 11/038,590 (US 2006-0026535 A1), "Mode-Based Graphical User Interfaces For Touch Sensitive Input Devices," filed Jan. 18, 2005; (6) U.S. patent application Ser. No. 11/228,758 (US 2006-0033724 A1), "Virtual Input Device Placement On A Touch Screen User Interface," filed Sep. 16, 2005; (7) U.S. patent application Ser. No. 11/228,700 (US 2006-0053387 A1), "Operation Of A Computer With A Touch Screen Interface," filed Sep. 16, 2005; (8) U.S. patent application Ser. No. 11/228,737 (US 2006-0085757 A1), "Activating Virtual Keys Of A Touch-Screen Virtual Keyboard," filed Sep. 16, 2005; and (9) U.S. patent application Ser. No. 11/367,749 (US 2006-0197753 A1), "Multi-Functional Hand-Held Device," filed Mar. 3, 2006. All of these applications are incorporated by reference herein in their entirety.

[00679] The proximity sensor may perform as described in U.S. patent application Ser. Nos. 11/241,839 (US 2006-0161871 A1), "Proximity Detector In Handheld Device"; 11/240,788 (US 2006-0161870 A1), "Proximity Detector In Handheld Device"; 11/620,702 (US 2008-0167834 A1), "Using Ambient Light Sensor To Augment Proximity Sensor Output"; 11/586,862 (US 2007-0075965 A1), "Automated Response To And Sensing Of User Activity In Portable Devices"; and 11/638,251 (US 2008-0140868 A1), "Methods And Systems For Automatic Configuration Of Peripherals," which are hereby incorporated by reference in their entirety.

[00680] The accelerometer may perform as described in U.S. Patent Publication No. 20050190059, "Acceleration-based Theft Detection System for Portable Electronic Devices," and U.S. Patent Publication No. 20060017692, "Methods And Apparatuses For Operating A Portable Device Based On An Accelerometer," both of which are which are incorporated by reference herein in their entirety.

[00681] Additional description of the online video application can be found in U.S. Provisional Patent Application No. 60/936,562, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Jun. 20, 2007, and U.S. patent application Ser. No. 11/968,067 (US 2008-0320391 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00682] Processes that use gestures on the touch screen to unlock the device are described in U.S. patent application Ser. Nos. 11/322,549 (US 2007-0150842 A1), "Unlocking A Device By Performing Gestures On An Unlock Image," filed Dec. 23, 2005, and 11/322,550 (US 2007-0150826 A1), "Indication Of Progress Towards Satisfaction Of A User Input Condition," filed Dec. 23, 2005, which are hereby incorporated by reference in their entirety.

[00683] In some embodiments, a user may rearrange the icons in UI, e.g., using processes described in U.S. patent application Ser. No. 11/459,602 (US 2007-0157089 A1), "Portable Electronic Device With

Interface Reconfiguration Mode," filed Jul. 24, 2006, which is hereby incorporated by reference in its entirety.

[00684] In some embodiments, UI includes a gauge (not shown) that displays an updated account usage metric for an account associated with usage of the device (e.g., a cellular phone account), as described in U.S. patent application Ser. No. 11/322,552 (US 2007-0149252 A1), "Account Information Display For Portable Communication Device," filed Dec. 23, 2005, which is hereby incorporated by reference in its entirety.

[00685] Additional description of insertion marker positioning can be found in U.S. patent application Ser. No. 11/553,436 (US 2008-0259040 A1), "Method, System, And Graphical User Interface For Positioning An Insertion Marker In A Touch Screen Display," filed Oct. 26, 2006, and U.S. Provisional Patent Application No. 60/947,382, "Portable Multifunction Device, Method, and Graphical User Interface for Adjusting an Insertion Point Marker," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/923,453 (US 2008-0165142 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Adjusting an Insertion Point Marker," filed Oct. 24, 2007, the contents of which are hereby incorporated by reference herein in their entirety.

[00686] Additional description of instant messaging on portable electronic devices can be found in U.S. Provisional Patent Application Nos. 60/883,819, "Portable Electronic Device For Instant Messaging," filed Jan. 7, 2007, and 60/946,969, "Portable Electronic Device For Instant Messaging," filed Jun. 28, 2007, and U.S. patent application Ser. No. 11/848,208 (US 2008-0055269 A1), "Portable Electronic Device for Instant Messaging," filed Aug. 30, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00687] Additional description of deletion gestures on portable electronic devices can be found in U.S. Provisional Patent Application Nos. 60/883,814, "Deletion Gestures On A Portable Multifunction Device," filed Jan. 7, 2007 and 60/936,755, "Deletion Gestures On A Portable Multifunction Device," filed Jun. 22, 2007, and U.S. patent application Ser. No. 11/850,642 (US 2008-0094371 A1), "Deletion Gestures on a Portable Multifunction Device," filed Sep. 5, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00688] As described in U.S. patent application Ser. Nos. 11/322,547 (US 2007-0150830 A1), "Scrolling List With Floating Adjacent Index Symbols," filed Dec. 23, 2005; 11/322,551 (US 2007-0146337 A1), "Continuous Scrolling List With Acceleration," filed Dec. 23, 2005; and 11/322,553 (US 2007-0132789 A1), "List Scrolling In Response To Moving Contact Over List Of Index Symbols," filed Dec. 23, 2005, which are hereby incorporated by reference in their entirety, the user may scroll through the contact list using vertically upward and/or vertically downward gestures 814 on the touch screen.

[00689] Additional descriptions of word suggestion can be found in U.S. patent application Ser. No. 11/620,641 (US 2008-0167858 A1), "Method, System, And Graphical User Interface For Providing Word Recommendations for Text Input," filed Jan. 5, 2007) and U.S. patent application Ser. No. 11/620,642 (US 2008-0168366 A1), "Method, System, And Graphical User Interface For Providing Word

Recommendations," filed Jan. 5, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00690] Additional description of image management can be found in U.S. Provisional Patent Application Nos. 60/883,785, "Portable Electronic Device For Photo Management," filed Jan. 6, 2007, and 60/947,118, "Portable Electronic Device For Photo Management," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/848,210 (US 2008-0052945 A1), "Portable Electronic Device For Photo Management," filed Aug. 30, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00691] Additional description of a video player and manager can be found in U.S. Provisional Patent Application Nos. 60/883,784, "Video Manager For Portable Multifunction Device," filed Jan. 6, 2007, and 60/946,973, "Video Manager For Portable Multifunction Device," filed Jun. 28, 2007, and U.S. patent application Ser. No. 11/850,008 (US 2008-0055272 A1), "Video Manager For Portable Multifunction Device," filed Sep. 4, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00692] Additional description of configuring and displaying widgets can be found in U.S. Provisional Patent Application No. 60/946,975, "Portable Multifunction Device, Method, and Graphical User Interface for Configuring and Displaying Widgets," filed Jun. 28, 2007, and U.S. patent application Ser. No. 11/850,010 (US 2008-0082930 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Configuring and Displaying Widgets," filed Sep. 4, 2007, the content of which is hereby incorporated by reference in its entirety.

[00693] As described in U.S. patent application Ser. No. 11/322,547 (US 2007-0150830 A1), "Scrolling List With Floating Adjacent Index Symbols," filed Dec. 23, 2005, which is hereby incorporated by reference in its entirety, the user may scroll through the contact list using vertically upward and/or vertically downward gestures 2602 on the touch screen.

[00694] Additional description of the reordering of user-configurable lists can be found in U.S. Provisional Patent Application No. 60/883,808, "System And Method For Managing Lists," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/770,725 (US 2008-0165136 A1), "System and Method for Managing Lists," filed Jun. 28, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00695] Additional description of missed call management can be found in U.S. Provisional Patent Application No. 60/883,782, "Telephone Call Management For A Portable Multifunction Device," filed Jan. 6, 2007, and U.S. patent application Ser. No. 11/769,694 (US 2008-0057926 A1), "Missed Telephone Call Management for a Portable Multifunction Device," filed Jun. 27, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00696] Additional description of location-based dialing can be found in U.S. Provisional Patent Application No. 60/883,800, "Method, Device, And Graphical User Interface For Location-Based Dialing," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/769,692 (US 2008-0167083 A1), "Method, Device,

and Graphical User Interface for Location-Based Dialing," filed Jun. 27, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00697] Additional description of conference calling can be found in U.S. Provisional Patent Application No. 60/947,133, "Portable Multifunction Device, Method, and Graphical User Interface for Conference Calling," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/960,673 (US 2008-0168361 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Conference Calling," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00698] Additional description of application switching can be found in U.S. Provisional Patent Application No. 60/883,809, "Portable Electronic Device Supporting Application Switching," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/969,908 (US 2008-0168379 A1) , "Portable Electronic Device Supporting Application Switching," filed Jan. 6, 2008, the content of which is hereby incorporated by reference in its entirety.

[00699] Additional description of user interfaces for handling incoming calls can be found in U.S. Provisional Patent Application No. 60/883,783, "Incoming Telephone Call Management For A Portable Multifunction Device," filed Jan. 6, 2007, and U.S. patent application Ser. No. 11/769,695 (US 2008-0055263 A1), "Incoming Telephone Call Management For A Portable Multifunction Device," filed Jun. 27, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00700] Additional description of the voicemail system can be found in U.S. Provisional Patent Application No. 60/883,799, "Voicemail Manager For Portable Multifunction Device," filed Jan. 7, 2007; U.S. patent application Ser. No. 11/770,720 (US 2008-0055264 A1), "Voicemail Manager for Portable Multifunction Device," filed Jun. 28, 2007; and 60/947,348, "Voicemail Set-Up on a Portable Multifunction Device," filed Jun. 29, 2007; and U.S. patent application Ser. No. 11/961,716 (US 2008-0168353 A1), "Voicemail Set-Up on a Portable Multifunction Device," filed Dec. 20, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00701] Edit icon that when activated (e.g., by a finger tap on the icon) initiates display of a user interface for deleting emails (e.g., as described in U.S. Provisional Patent Application Nos. 60/883,814, "Deletion Gestures On A Portable Multifunction Device," filed Jan. 7, 2007, and 60/936,755, "Deletion Gestures On A Portable Multifunction Device," filed Jun. 22, 2007, and U.S. patent application Ser. No. 11/850,642 (US 2008-0094371 A1), "Deletion Gestures On A Portable Multifunction Device," filed Sep. 5, 2007, the contents of which are hereby incorporated by reference in their entirety).

[00702] In some embodiments, in response to detecting a horizontal swipe gesture on a particular email message in a the list of emails messages, a process for deleting the particular email message is initiated (e.g., as described in U.S. Provisional Patent Application Nos. 60/883,814, "Deletion Gestures On A Portable Multifunction Device," filed Jan. 7, 2007, and 60/936,755, "Deletion Gestures On A Portable Multifunction Device," filed Jun. 22, 2007, and U.S. patent application Ser. No. 11/850,642 (US 2008-0094371 A1),

"Deletion Gestures On A Portable Multifunction Device," filed Sep. 5, 2007, the contents of which are hereby incorporated by reference in their entirety).

[00703] Additional description of an email client can be found in U.S. Provisional Patent Application No. 60/883,807, "Email Client For A Portable Multifunction Device," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/850,630 (US 2008-0094369 A1), "Email Client For A Portable Multifunction Device," filed Sep. 5, 2007, the content of which is hereby incorporated by reference in its entirety.

[00704] Methods for efficiently fetching email messages can be found in U.S. Provisional Patent Application No. 60/947,395, "Email Fetching System and Method in a Portable Electronic Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/968,070 (US 2009-0006570 A1), "Email Fetching System and Method in a Portable Electronic Device," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00705] Methods for automatically selecting email ports and email security can be found in U.S. Provisional Patent Application No. 60/947,396, "Port Discovery and Message Delivery in a Portable Electronic Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/968,076 (US 2009-0006644 A1), "Port Discovery and Message Delivery in a Portable Electronic Device," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00706] Additional description of displaying structured electronic documents (e.g., web pages) can be found in U.S. Provisional Patent Application No. 60/946,715, "Portable Electronic Device, Method, and Graphical User Interface for Displaying Structured Electronic Documents," filed Jun. 27, 2007, and U.S. patent application Ser. No. 11/850,013 (US 2008-0094368 A1), "Portable Electronic Device, Method, and Graphical User Interface for Displaying Structured Electronic Documents," filed Sep. 4, 2007, the content of which is hereby incorporated by reference in its entirety.

[00707] Additional description of adding windows to an application can be found in U.S. patent application Ser. No. 11/620,647 (US 2008-0168401 A1), "Method, System, And Graphical User Interface For Viewing Multiple Application Windows," filed Jan. 5, 2007, the content of which is hereby incorporated by reference in its entirety.

[00708] Additional description of displaying inline multimedia content can be found in U.S. Provisional Patent Application No. 60/947,155, "Portable Electronic Device, Method, and Graphical User Interface for Displaying Inline Multimedia Content," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/961,773 (US 2008-0165148 A1), "Portable Electronic Device, Method, and Graphical User Interface for Displaying Inline Multimedia Content," filed Dec. 20, 2007, the content of which is hereby incorporated by reference in its entirety.

[00709] Additional description of interacting with user input elements can be found in U.S. Provisional Patent Application No. 60/947,127, "Portable Multifunction Device, Method, and Graphical User Interface for Interacting with User Input Elements in Displayed Content," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/960,394 (US 2008-0165143 A1), "Portable Multifunction Device, Method, and

Graphical User Interface for Interacting with User Input Elements in Displayed Content," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00710] Additional description of displaying and activating hyperlinks using interfaces can be found in U.S. patent application Ser. No. 11/620,644 (US 2008-0165133 A1), "Method, System, And Graphical User Interface For Displaying Hyperlink Information," filed Jan. 5, 2007, and in U.S. patent application Ser. No. 11/620,646 (US 2008-0259041 A1), "Method, System, And Graphical User Interface For Activating Hyperlinks," filed Jan. 5, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00711] Additional description of translating displayed content can be found in U.S. Provisional Patent Application No. 60/946,976, "Portable Multifunction Device, Method, and Graphical User Interface for Translating Displayed Content," filed Jun. 28, 2007, and U.S. patent application Ser. No. 11/960,675 (US 2008-0168405 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Translating Displayed Content," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00712] Additional description of "rubber band-like" scrolling and translation behavior can be found in U.S. Provisional Patent Application Nos. 60/883,801, "List Scrolling And Document Translation On A Touch-Screen Display," filed Jan. 7, 2007; 60/945,858, "List Scrolling and Document Translation on a Touch-Screen Display," filed Jun. 22, 2007, and 60/946,971, "List Scrolling and Document Translation on a Touch-Screen Display," filed Jun. 28, 2007, and U.S. patent application Ser. No. 11/956,969 (US 2008-0168404 A1), "List Scrolling and Document Translation, Scaling, and Rotation on a Touch-Screen Display," filed Dec. 14, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00713] Additional description of scrolling is described in U.S. patent application Ser. Nos. 11/322,547 (US 2007-0150830 A1), "Scrolling List With Floating Adjacent Index Symbols," filed Dec. 23, 2005; 11/322,551 (US 2007-0146337 A1), "Continuous Scrolling List With Acceleration," filed Dec. 23, 2005; and 11/322,553 (US 2007-0132789 A1), "List Scrolling In Response To Moving Contact Over List Of Index Symbols," filed Dec. 23, 2005, which are hereby incorporated by reference in their entirety.

[00714] Additional description of user interface object reconfiguration can be found in U.S. Provisional Patent Application No. 60/937,990, "Portable Multifunction Device, Method, and Graphical User Interface Supporting User Navigations of Graphical Objects on a Touch Screen Display," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/969,809 (US 2008-0165153 A1), "Portable Multifunction Device, Method, and Graphical User Interface Supporting User Navigations of Graphical Objects on a Touch Screen Display," filed Jan. 4, 2008, the content of which is hereby incorporated by reference in its entirety.

[00715] U.S. Provisional Patent Application No. 60/936,562, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Jun. 20, 2007, and U.S. patent application Ser. No. 11/968,067 (US 2008-0320391 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety, describes a way that major online video content categories can be rearranged by a

user to correspond to the user's preferred (favorite) categories. The teachings in that application are also applicable here to rearranging major music and/or video categories.

[00716] Cover flow mode and other image modes are described in U.S. Provisional Patent Application No. 60/843,832, "Techniques And Systems For Browsing Media Content," filed Sep. 11, 2006; U.S. patent application Ser. No. 11/519,460 (US 2008-0066016 A1), "Media Manager With Integrated Browsers," filed Sep. 11, 2006; and U.S. Provisional Patent Application No. 60/878,746 "Electronic Device With Image Based Browsing," filed Jan. 5, 2007, which are hereby incorporated by reference in their entirety.

[00717] Additional description of mode changes based on device orientation can be found in U.S. Provisional Patent Application No. 60/947,300, "Modal Change Based on Orientation of a Portable Multifunction Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/969,800 (US 2008-0165152 A1), "Modal Change Based on Orientation of a Portable Multifunction Device," filed Jan. 4, 2008, the content of which is hereby incorporated by reference in its entirety.

[00718] Additional description of portrait-landscape rotation heuristics can be found in U.S. Provisional Patent Application No. 60/947,132, "Portrait-Landscape Rotation Heuristics for a Portable Multifunction Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/960,671 (US 2008-0165144 A1), "Portrait-Landscape Rotation Heuristics for a Portable Multifunction Device," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00719] Additional description of adaptive user interface displays can be found in U.S. Provisional Patent Application No. 60/937,992, "Portable Multifunction Device, Method, and Graphical User Interface for Displaying User Interface Objects Adaptively," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/961,760 (US 2008-0165147 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Displaying User Interface Objects Adaptively," filed Dec. 20, 2007, the content of which is hereby incorporated by reference in its entirety.

[00720] Additional description of artwork can be found in U.S. Provisional Patent Application No. 60/883,818, "Creating Digital Artwork Based On Content File Metadata," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/960,674 (US 2008-0168365 A1), "Creating Digital Artwork Based On Content File Metadata," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00721] Additional description of positioning a slider icon can be found in U.S. Provisional Patent Application No. 60/947,304, "Positioning a Slider Icon on a Portable Multifunction Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/968,064 (US 2008-0168395 A1), "Positioning a Slider Icon on a Portable Multifunction Device," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00722] Additional description of word suggestion can be found in U.S. patent application Ser. No. 11/620,641 (US 2008-0167858 A1), "Method And System For Providing Word Recommendations For Text Input," filed Jan. 5, 2007, and U.S. patent application Ser. No. 11/620,642 (US 2008-0168366 A1), "Method,

System, And Graphical User Interface For Providing Word Recommendations," filed Jan. 5, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00723] Additional description of calendars can be found in U.S. Provisional Patent Application No. 60/883,820, "System And Method For Viewing And Managing Calendar Entries," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/969,786 (US 2008-0165151 A1), "System and Method for Viewing And Managing Calendar Entries," filed Jan. 4, 2008, the content of which is hereby incorporated by reference in its entirety.

[00724] Additional description of inputting date and time information can be found in U.S. Provisional Patent Application No. 60/947,146, "System, Method, and Graphical User Interface for Inputting Date and Time Information on a Portable Multifunction Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/968,051 (US 2008-0165149 A1), "System, Method, and Graphical User Interface for Inputting Date and Time Information on a Portable Multifunction Device," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00725] Additional description of user created widgets can be found in U.S. Provisional Patent Application Nos. 60/883,805, "Web Clip Widgets On A Portable Multifunction Device," filed Jan. 7, 2007, and 60/946,712, "Web Clip Widgets on a Portable Multifunction Device," filed Jun. 27, 2007, and U.S. patent application Ser. No. 11/850,011 (US 2008-0055273 A1), "Web Clip Widgets On a Portable Multifunction Device," filed Sep. 4, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00726] Additional description of providing maps and directions can be found in U.S. Provisional Patent Application No. 60/936,725, "Portable Multifunction Device, Method, and Graphical User Interface for Providing Maps and Directions," filed Jun. 22, 2007, and U.S. patent application Ser. No. 11/969,211 (US 2008-0168396 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Providing Maps and Directions," filed Jan. 3, 2008, the content of which is hereby incorporated by reference in its entirety.

[00727] Additional description of displaying notification information for missed communications can be found in U.S. Provisional Patent Application No. 60/883,804, "System And Method For Displaying Communication Notifications," filed Jan. 7, 2007 and U.S. patent application Ser. No. 11/770,718 (US 2008-0220752 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Managing Communications Received While in a Locked State," filed Jun. 28, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00728] Additional description of methods for silencing a portable device can be found in U.S. Provisional Patent Application No. 60/883,802, "Portable Electronic Device With Alert Silencing," filed Jan. 7, 2007 and U.S. patent application Ser. No. 11/770,727 (US 2008-0165022 A1), "Portable Electronic Device with Alert Silencing," filed Jun. 28, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00729] Additional description of methods for turning off a portable device can be found in U.S. Provisional Patent Application No. 60/883,786, "Power-Off Methods For Portable Electronic Devices," filed Jan. 6, 2007, and U.S. patent application Ser. No. 11/770,722 (US 2008-0168290 A1), "Power-Off Methods For Portable Electronic Devices," filed Jun. 28, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00730] Additional description of determining a cursor position from a finger contact can be found in U.S. Provisional Patent Application No. 60/946,716, "Methods for Determining a Cursor Position from a Finger Contact with a Touch Screen Display," filed Jun. 27, 2007, and U.S. patent application Ser. No. 11/850,015 (US 2008-0094356 A1), "Methods for Determining a Cursor Position from a Finger Contact with a Touch Screen Display," filed Sep. 4, 2007, the content of which is hereby incorporated by reference in its entirety.

[00731] Additional description of the horizontal and vertical bars can be found in U.S. Provisional Patent Application No. 60/947,386, "Portable Electronic Device, Method, and Graphical User Interface for Displaying Electronic Documents and Lists," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/968,059 (US 2008-0168349 A1), "Portable Electronic Device, Method, and Graphical User Interface for Displaying Electronic Documents and Lists," filed Dec. 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00732] Additional description of gestures can be found in U.S. Provisional Patent Application Nos. 60/883,817, "Portable Electronic Device Performing Similar Operations For Different Gestures," filed Jan. 7, 2007, and 60/946,970, "Screen Rotation Gestures on a Portable Multifunction Device," filed Jun. 28, 2007, and U.S. patent application Ser. Nos. 11/850,638 (US 2008-0094370 A1), "Portable Electronic Device Performing Similar Operations For Different Gestures," filed Sep. 5, 2007, and 11/960,667 (US 2008-0211778 A1), "Screen Rotation Gestures on a Portable Multifunction Device," filed Dec. 19, 2007, the contents of which are hereby incorporated by reference in their entirety.

[00733] Additional description of interpreting a finger gesture can be found in U.S. Provisional Patent Application No. 60/946,977, "Portable Multifunction Device, Method, and Graphical User Interface for Interpreting a Finger Gesture on a Touch Screen Display," filed Jun. 28, 2007, and U.S. patent application Ser. No. 11/969,796 (US 2008-0165160 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Interpreting a Finger Gesture on a Touch Screen Display," filed Jan. 4, 2008, the content of which is hereby incorporated by reference in its entirety.

[00734] Additional description of interpreting a finger swipe gesture can be found in U.S. Provisional Patent Application No. 60/947,140, "Portable Multifunction Device, Method, and Graphical User Interface for Interpreting a Finger Swipe Gesture," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/961,700 (US 2008-0165145 A1), "Portable Multifunction Device, Method, and Graphical User Interface for Interpreting a Finger Swipe Gesture," filed Dec. 20, 2007, the content of which is hereby incorporated by reference in its entirety.

[00735] Additional description of heuristics can be found in U.S. Provisional Patent Application No. 60/937,991, "Touch Screen Device, Method, and Graphical User Interface for Determining Commands by Applying Heuristics," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/850,635 (US 2008-0122796 A1), "Touch Screen Device, Method, and Graphical User Interface for Determining Commands by Applying Heuristics," filed Sep. 5, 2007, the content of which is hereby incorporated by reference in its entirety.

[00736] Additional description of soft keyboards can be found in U.S. Provisional Patent Application No. 60/946,714, "Portable Multifunction Device with Soft Keyboards," filed Jun. 27, 2007, and U.S. patent application Ser. No. 11/961,663 (US 2008-0098331 A1), "Portable Multifunction Device with Soft Keyboards," filed Dec. 20, 2007, the content of which is hereby incorporated by reference in its entirety.

[00737] Additional description of keyboards can be found in U.S. Provisional Patent Application No. 60/883,806, "Soft Keyboard Display For A Portable Multifunction Device," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/850,641 (US 2008-0082934 A1), "Soft Keyboard Display For A Portable Multifunction Device," filed Sep. 5, 2007, the content of which is hereby incorporated by reference in its entirety.

[00738] Additional description of airplane mode indicators can be found in U.S. Provisional Patent Application No. 60/947,315, "Airplane Mode Indicator on a Portable Multifunction Device," filed Jun. 29, 2007, and U.S. patent application Ser. No. 11/961,743 (US 2008-0165146 A1), "Airplane Mode Indicator on a Portable Multifunction Device," filed Dec. 20, 2007, the content of which is hereby incorporated by reference in its entirety.

[00739] Additional description of dimming techniques can be found in U.S. Provisional Patent Application No. 60/883,821, "Portable Electronic Device With Auto-Dim Timers," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/960,677 (US 2008-0218535 A1), "Portable Electronic Device With Auto-Dim Timers," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00740] Additional description of settings-related techniques can be found in U.S. Provisional Patent Application No. 60/883,812, "Portable Electronic Device With A Global Setting User Interface," filed Jan. 7, 2007, and U.S. patent application Ser. No. 11/960,669 (US 2008-0222545 A1), "Portable Electronic Device With A Global Setting User Interface," filed Dec. 19, 2007, the content of which is hereby incorporated by reference in its entirety.

[00741] In accordance with various embodiments, a toolbox window is contemplated to have the functionality similar to that set forth in U.S. Pat. No. 7,600,193 to Gunderson entitled "A METHOD OF TRACKING DUAL MODE DATA OBJECTS USING RELATED THUMBNAILS AND TOOL ICONS IN A PALETTE WINDOW," the disclosure of which is wholly incorporated by reference herein.

[00742] U.S. Patent Application titled "Video Conferencing System Transcoder", Ser. No. 11/252,238 (US 2006-0087553 A1), which was filed Oct. 17, 2005, whose inventors are Michael L. Kenoyer and Michael V. Jenkins, is hereby incorporated by reference in its entirety as though fully and completely set forth herein.

[00743] Similarly, the conference may be a videoconference, and the videoconference may be established according to any of a variety of methods, e.g., the one described in patent application Ser. No. 11/252,238 (US 2006-0087553 A1), which was incorporated by reference above.

[00744] A proximity sensor may perform as described in U.S. patent application Ser. No. 11/241,839 (US 2006-0161871 A1), "Proximity Detector In Handheld Device," filed Sep. 30, 2005; Ser. No. 11/240,788 (US 2006-0161870 A1), "Proximity Detector In Handheld Device," filed Sep. 30, 2005; Ser. No. 11/620,702 (US 2008-0167834 A1), "Using Ambient Light Sensor To Augment Proximity Sensor Output"; Ser. No. 11/586,862 (US 2007-0075965 A1), "Automated Response To And Sensing Of User Activity In Portable Devices," filed Oct. 24, 2006; and Ser. No. 11/638,251 (US 2008-0140868 A1), "Methods And Systems For Automatic Configuration Of Peripherals," which are hereby incorporated by reference in their entirety.

[00745] In some embodiments, a user may rearrange the icons in UI, e.g., using processes described in U.S. patent application Ser. No. 11/459,602 (US 2007-0157089 A1), "Portable Electronic Device With Interface Reconfiguration Mode," filed Jul. 24, 2006, which is hereby incorporated by reference in its entirety. For example, a user may move application icons in and out of tray 408 using finger gestures.

[00746] While various embodiments have been described above, it should be understood that they have been presented by way of example only, and not limitation. Thus, the breadth and scope of a preferred embodiment should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.

CLAIMS

1. A method, comprising:

at a device having a display and a touch-sensitive surface:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets one or more criteria;

in response to detecting the first input by the first contact that meets the one or more criteria:

in accordance with a determination that the first application is subject to the first contact meeting the one or more criteria, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface.

2. The method of claim 1, wherein the one or more criteria require that the first input includes a movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met.

3. The method of claim 2, wherein the one or more criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary in order for the one or more criteria to be met.

4. The method of claim 3, wherein the boundary is of a predefined region of the touch-sensitive surface.

5. The method of claim 3, wherein the boundary is of a predefined edge region of the touch-sensitive surface.

6. The method of claim 4, wherein at least one of:

the one or more criteria includes navigation-gesture criteria;

the one or more criteria includes a single criteria;

the one or more criteria includes at least one criteria;

the one or more criteria includes more than one criteria;

the predefined edge region includes a contact area;

the predefined edge region includes a selection area;

the predefined edge region includes a region near an edge;

the predefined edge region includes a region at an edge;

the predefined edge region includes a region within a predetermined distance from an edge;

the predefined edge region includes a contact area near an edge of the display;

the predefined edge region includes a contact area at an edge of the display;

the predefined edge region includes a contact area within a predetermined distance from an edge of the display;

the predefined edge region includes a contact area near an edge of the touch-sensitive surface;

the predefined edge region includes a contact area at an edge of the touch-sensitive surface;

the predefined edge region includes a contact area within a predetermined distance from an edge of the touch-sensitive surface;

the predefined edge region includes a selection area;

the boundary includes a boundary of a contact area;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of an entirety of the first contact across the touch-sensitive surface in order for the one or more criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of only a portion of the first contact across the touch-sensitive surface in order for the one or more criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of the first contact across an entirety of the touch-sensitive surface in order for the one or more criteria to be met;

the movement of the first contact across the touch-sensitive surface in order for the one or more criteria to be met, includes movement of the first contact across only a portion of the touch-sensitive surface in order for the one or more criteria to be met;

the one or more criteria require that the first input includes the movement of the first contact across the touch-sensitive surface that crosses a boundary of a predefined edge region of the touch-sensitive surface in order for the one or more criteria to be met;

the first application is subject to the first contact meeting the one or more criteria by not being protected therefrom;

the first application is not subject to the first contact meeting the one or more criteria by being protected therefrom;

the first application is subject to the first contact meeting the one or more criteria, by ceasing to display the first user interface of the first application and displaying the respective other user interface on the display in response to the first contact meeting the one or more criteria;

the first application is not subject to the first contact meeting the one or more criteria, by not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display in response to the first contact meeting the one or more criteria;

the while displaying the first user interface of the first application includes at any point in time when the first user interface of the first application is displayed;

the while displaying the first user interface of the first application includes an entire duration in time when the first user interface of the first application is displayed; or

the maintaining display of the first user interface of the first application without displaying the respective other user interface, is the same as not ceasing to display the first user interface of the first application and not displaying the respective other user interface on the display.

7. An electronic device, comprising:

a display;

a touch-sensitive surface;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a first user interface of a first application on the display;

while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets one or more criteria;

in response to detecting the first input by the first contact that meets the one or more criteria:

in accordance with a determination that the first application is subject to the first contact meeting the one or more criteria, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and

in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface.

8. A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by an electronic device with a display and a touch-sensitive surface, cause the device to:

display a first user interface of a first application on the display;

while displaying the first user interface of the first application, detect a first input by a first contact on the touch-sensitive surface that meets one or more criteria;

in response to detecting the first input by the first contact that meets the one or more criteria:

in accordance with a determination that the first application is subject to the first contact meeting the one or more criteria, cease to display the first user interface of the first application and display a respective other user interface on the display; and

in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintain display of the first user interface of the first application without displaying the respective other user interface.

ABSTRACT

In one embodiment, an apparatus and associated method are provided, comprising: at a device having a display and a touch-sensitive surface: displaying a first user interface of a first application on the display; while displaying the first user interface of the first application, detecting a first input by a first contact on the touch-sensitive surface that meets one or more criteria; in response to detecting the first input by the first contact that meets the one or more criteria: in accordance with a determination that the first application is subject to the first contact meeting the one or more criteria, ceasing to display the first user interface of the first application and displaying a respective other user interface on the display; and in accordance with a determination that the first application is not subject to the first contact meeting the one or more criteria, maintaining display of the first user interface of the first application without displaying the respective other user interface.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK
First Named Inventor/Applicant Name:	Michael S Smith
Filer:	Patrick Edgar Caldwell
Attorney Docket Number:	SMITH070AT_1

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	80	80
UTILITY SEARCH FEE	2111	1	350	350
UTILITY EXAMINATION FEE	2311	1	400	400
Pages:				
UTILITY APPL SIZE FEE PER 50 SHEETS >100	2081	1	210	210
Claims:				
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		1040

Electronic Acknowledgement Receipt	
EFS ID:	42223465
Application Number:	17206107
International Application Number:	
Confirmation Number:	7030
Title of Invention:	DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR MANIPULATING USER INTERFACE OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK
First Named Inventor/Applicant Name:	Michael S Smith
Customer Number:	92045
Filer:	Patrick Edgar Caldwell
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The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	SMITH070_070AT-1_POA_18-Mar-2021.PDF	175746 271d44c87b29e3f76735e6ec169ef44261ec2d86	no	1
Warnings:					
Information:					
2	Oath or Declaration filed	SMITH070AI_070AT-1_Declaration_18-Mar-2021.pdf	112635 6d4b365b726d50c7366b04ec6b1786f91576075f	no	1
Warnings:					
Information:					
3	Application Data Sheet	SMITH070AT_1_ADS_vF_18-Mar-2021.pdf	1874152 599ebf591824378089974 0d63df85edce0cff65a	no	9
Warnings:					
Information:					
4	Drawings-only black and white line drawings	SMITH070AT_070AT-1_Drawings_vF_18-Mar-2021.pdf	2937003 65d31a46f530985dea43435ec0eaac9672bc22bd	no	28
Warnings:					
Information:					
5		SMITH070AT_1_Application_vF_18-Mar-2021.pdf	778060 b35ee028bec29ae75471c6f13d7600222af96edd	yes	118

Multipart Description/PDF files in .zip description

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Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	37086 df6032723ab2096337cb7fc1cd3cab166a19c963	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	5914682		

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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DocCode – SCORE

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Application Number: 17206107 Document Date: 03/18/2021

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Form Revision Date: March 1, 2019