

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Texas (Waco Division) on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 6:22-cv-334	DATE FILED 3/30/2022	U.S. DISTRICT COURT Western District of Texas (Waco Division)
PLAINTIFF Maxell, Ltd.		DEFENDANT Lenovo Group Ltd., Lenovo (United States) Inc., and Motorola Mobility LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,199,821	4/3/2007	Maxell, Ltd.
2 7,324,487	1/29/2008	Maxell, Ltd.
3 8,170,394	5/1/2012	Maxell, Ltd.
4 8,982,086	3/17/2015	Maxell, Ltd.
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED 3/30/2022	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☒ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 10,129,590	11/13/2018	Maxell, Ltd.
2 10,244,284	3/26/2019	Maxell, Ltd.
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/154,993	01/14/2014	Masaaki YAMADA	093265-0037

177632
BANNER & WITCOFF, LTD.
1100 13th STREET, N.W.
SUITE 1200
WASHINGTON, DC 20005-4051

CONFIRMATION NO. 3897
POA ACCEPTANCE LETTER



Date Mailed: 02/22/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/18/2021.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/rbell/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/154,993	01/14/2014	Masaaki YAMADA	093265-0037

CONFIRMATION NO. 3897

POWER OF ATTORNEY NOTICE



OC000000123534825

20277
MCDERMOTT WILL & EMERY LLP
THE MCDERMOTT BUILDING
500 NORTH CAPITOL STREET, N.W.
WASHINGTON, DC 20001

Date Mailed: 02/22/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/18/2021.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/rbell/



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



Bib Data Sheet

CONFIRMATION NO. 3897

SERIAL NUMBER 14/154,993	FILING OR 371(c) DATE 01/14/2014 RULE	CLASS 345	GROUP ART UNIT 2624	ATTORNEY DOCKET NO. 093265-0037
AIA (First Inventor to File): YES				
INVENTORS Masaaki YAMADA, Yokohama, JAPAN;				
APPLICANTS MAXELL, LTD., KYOTO, JAPAN;				
** CONTINUING DATA ***** This application is a CON of 13/366,983 02/06/2012 PAT 8654093				
** FOREIGN APPLICATIONS ***** JAPAN 2011-025576 02/09/2011				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/28/2014				
Foreign Priority claimed ☐ yes ☐ no 35 USC 119 (a-d) conditions ☐ yes ☐ no ☐ Met after met Allowance Verified and Acknowledged		STATE OR COUNTRY JAPAN	SHEETS DRAWING 17	TOTAL CLAIMS 1
INDEPENDENT CLAIMS 1				
ADDRESS 177632				
TITLE INFORMATION PROCESSING APPARATUS				
FILING FEE RECEIVED 1740	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit	

REEXAMINATION OR SUPPLEMENTAL EXAMINATION – PATENT OWNER POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS FOR REEXAMINATION OR SUPPLEMENTAL EXAMINATION AND PATENT	Control Number(s)	90/014,638
	Filing Date(s)	December 23, 2020
	First Named Inventor	Masaaki Yamada
	Title	INFORMATION PROCESSING APPARATUS
	Patent Number	8,982,086
	Examiner Name	Robert L. Nasser
	Attorney Docket No(s)	009379.00005\US

I. Power of Attorney. This form may be used to change the Power of Attorney in a reexamination or supplemental examination proceeding (or multiple proceedings where merged). This form may also be used to change the Power of Attorney in the patent file; in such a case, a copy of this form will be placed in both the patent file and the reexamination or supplemental examination proceeding.

A. Revocation of Previous Power of Attorney. I hereby revoke all previous patent owner powers of attorney, if any, given:

☒ in the above-identified reexamination or supplemental examination proceeding control number(s) (more than one may be changed only if the proceedings are merged).

☐ in the file of the above-identified patent.

(check BOTH boxes if change in BOTH the patent file and the reexamination or supplemental examination proceeding is requested).

B. Designation of Power of Attorney.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) to prosecute the proceeding(s)/patent identified above and selected in section I(A), and to transact all business in the United States Patent and Trademark Office connected therewith:

177632

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the proceeding(s) identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Authorization for the Power of Attorney is provided by the signature on page 2 of this form.

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 15 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.

II. Change of Correspondence Address

Please recognize or change the correspondence address for the above-identified reexamination or supplemental examination proceeding control number(s) (more than one may be changed **only** if they are merged proceedings) **and for the file of the above-identified patent** to be:

☒ The address associated with the above-identified Customer Number.

OR

☐ The address associated with the Customer Number identified in the box at right:

--

OR

☐ Firm or Individual Name				
Address				
City		State		Zip
Country				
Telephone		Email		

NOTE: THE CORRESPONDENCE ADDRESS FOR THE REEXAMINATION OR SUPPLEMENTAL EXAMINATION PROCEEDING CONTROL NUMBER(S) MUST BE THE SAME AS THAT FOR THE PATENT. SEE 37 CFR 1.33.

III. Authorization for Power of Attorney and (if selected) Change of Correspondence Address

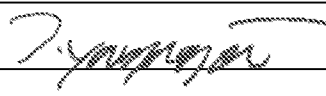
I am the:

☐ Inventor, having ownership of the patent being reexamined.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____.

Signature of Inventor or Patent Owner		Date	February 17, 2021
Name	Tatsuya Yamamoto	Telephone	
Title and Company	General Manager, Maxell, Ltd.		

NOTE: Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☒ A total of 2 forms are submitted. 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 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.

Electronic Acknowledgement Receipt

EFS ID:	41961202
Application Number:	90014638
International Application Number:	
Confirmation Number:	7843
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	8982086
Customer Number:	20277
Filer:	Scott M Kelly/Brooklyn Grossbard
Filer Authorized By:	Scott M Kelly
Attorney Docket Number:	2638-19.07
Receipt Date:	18-FEB-2021
Filing Date:	23-DEC-2020
Time Stamp:	17:24:34
Application Type:	Reexam (Patent Owner)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	90014638_- _Rule_373_Statement_- _00937900005_PTO_AIA_96_2 0991426.PDF	122281 1422fbd76bdd04ffcc0dbc3b26b7b59eaf8c efb0	no	3

Warnings:

Information:					
2	Power of Attorney	Executed_-_90014638_- _POA_- _00937900005_PTO_AIA_81B- 21050934.PDF	514148 2c1e28f4328e1d078f1f5073023e55b944de5c14	no	3
Warnings:					
Information:					
Total Files Size (in bytes):			636429		
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. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					

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.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Maxell, Ltd.Application No./Patent No.: 8982086Filed/Issue Date: March 17, 2015Titled: INFORMATION PROCESSING APPARATUSMaxell, Ltd., a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: MASAAKI YAMADA To: HITACHI CONSUMER ELECTRONICS CO., LTD.The document was recorded in the United States Patent and Trademark Office at
Reel 027659, Frame 0095, or for which a copy thereof is attached.2. From: HITACHI CONSUMER ELECTRONICS CO., LTD. To: HITACHI MAXELL, LTD.The document was recorded in the United States Patent and Trademark Office at
Reel 033610, Frame 0698, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). 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. 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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: HITACHI MAXELL, LTD. To: MAXELL, LTD.

The document was recorded in the United States Patent and Trademark Office at
Reel 045142, Frame 0208, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Scott M Kelly/

Signature

Scott M. Kelly

Printed or Typed Name

February 18, 2021

Date

65,121

Title or Registration 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.

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the Western District of Texas, Waco Division _____ on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 6:20-cv-00646	DATE FILED 7/16/2020	U.S. DISTRICT COURT for the Western District of Texas, Waco Division
PLAINTIFF Maxell, Ltd.		DEFENDANT Apple Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,203,517	4/10/2007	Maxell, Ltd.
2 8,982,086	3/17/2015	Maxell, Ltd.
3 7,199,821	4/3/2007	Maxell, Ltd.
4 10,129,590	11/13/2018	Maxell, Ltd.
5 10,176,848	1/8/2019	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas, Texarkana Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 5:18-cv-00136	DATE FILED 11/5/2018	U.S. DISTRICT COURT for the Eastern District of Texas, Texarkana Division
PLAINTIFF MAXELL, LTD.		DEFENDANT ASUSTEK COMPUTER INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,982,086	3/17/2015	Maxell, Ltd.
2 7,995,897	8/9/2011	Maxell, Ltd.
3 6,765,616	7/20/2004	Maxell, Ltd.
4 6,329,794	12/11/2001	Maxell, Ltd.
5 6,816,491	11/9/2004	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT Final Judgment. It is ORDERED that the above entitled and numbered cause of action is DISMISSED WITH PREJUDICE. Each party shall bear their own costs. Any remaining relief requested is DENIED. Ther Clerk of the Court is to close the case.

CLERK <i>David A. O'foole</i>	(BY) DEPUTY CLERK L. Siebel	DATE 05/02/19
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the Eastern District of Texas, Texarkana Division _____ on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 5:18-CV-34	DATE FILED 3/2/2018	U.S. DISTRICT COURT for the Eastern District of Texas, Texarkana Division
PLAINTIFF MAXELL, LTD.		DEFENDANT ZTE CORP. and ZTE USA, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,324,487	1/29/2008	Maxell, Ltd.
2 7,068,503	6/27/2006	Maxell, Ltd.
3 8,982,086	3/17/2015	Maxell, Ltd.
4 6,928,306	8/9/2005	Maxell, Ltd.
5 6,983,140	1/3/2006	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT It is ORDERED that all claims of Maxell against ZTE USA are DISMISSED WITH PREJUDICE. It is further ORDERED that all counterclaims of ZTE USA against Maxell are DISMISSED WITH PREJUDICE.
--

CLERK <i>David A. O'Toole</i>	(BY) DEPUTY CLERK slo	DATE 3/12/19
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
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AO 120 (Rev. 08/10)

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PLAINTIFF MAXELL, LTD.		DEFENDANT ZTE CORP. and ZTE USA, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
6 7,995,897	8/9/2011	Maxell, Ltd.
7 6,347,068	2/12/2002	Maxell, Ltd.
8 6,973,334	12/6/2005	Maxell, Ltd.
9 9,544,517	1/10/2017	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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DECISION/JUDGEMENT

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☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 5:18-CV-33	DATE FILED 3/2/2018	U.S. DISTRICT COURT for the Eastern District of Texas, Texarkana Division
PLAINTIFF MAXELL, LTD.		DEFENDANT HUAWEI DEVICE USA, INC., and HUAWEI DEVICE CO., LTD.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT It is ORDERED that all claims of Plaintiff Maxell, Ltd.(Maxell) against Huawei Device USA, Inc., and Huawei Device Co., Ltd.(Huawei) are hereby DISMISSED WITHOUT PREJUDICE. It is further ORDERED that all counterclaims of Huawei against Maxell are hereby DISMISSED WITHOUT PREJUDICE
--

CLERK <i>David A. O'Poole</i>	(BY) DEPUTY CLERK	DATE 4/4/19
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9 9,544,517	1/10/2017	Maxell, Ltd.
10 7,515,810	4/7/2009	Maxell, Ltd.

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☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 5:18-cv-00136	DATE FILED 11/5/2018	U.S. DISTRICT COURT for the Eastern District of Texas, Texarkana Division
PLAINTIFF MAXELL, LTD.		DEFENDANT ASUSTEK COMPUTER INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,982,086	3/17/2015	Maxell, Ltd.
2 7,995,897	8/9/2011	Maxell, Ltd.
3 6,765,616	7/20/2004	Maxell, Ltd.
4 6,329,794	12/11/2001	Maxell, Ltd.
5 6,816,491	11/9/2004	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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3 6,765,616	7/20/2004	Maxell, Ltd.
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,982,086 B2
APPLICATION NO. : 14/154993
DATED : March 17, 2015
INVENTOR(S) : Masaaki Yamada

Page 1 of 1

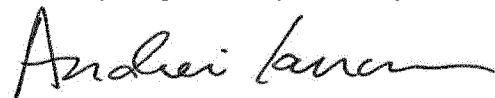
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

At Column 8, Claim 1, Line 17, delete “registering” and insert --identification--.

At Column 9, Claim 4, Line 2, delete “specific” and insert --specified--.

Signed and Sealed this
Twenty-eighth Day of May, 2019



Andrei Iancu
Director of the United States Patent and Trademark Office

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

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4 6,928,306	8/9/2005	Maxell, Ltd.
5 6,983,140	1/3/2006	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY		
	☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
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In the above—entitled case, the following decision has been rendered or judgement issued:

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--

CLERK <i>David A. O'Toole</i>	(BY) DEPUTY CLERK	DATE 4/4/19
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:	:	Customer Number: 20277
Masaaki YAMADA	:	
	:	
Patent No.: 8,982,086	:	
	:	
Issued: March 17, 2015	:	
	:	
For: INFORMATION PROCESSING APPARATUS	:	

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 C.F.R. § 1.323**

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Upon reviewing the above-identified patent, Patentee noted typographical errors which should be corrected.

In the Claims:

At Column 8, claim 1, line 17, delete “registering” and insert --identification--.

At Column 9, claim 4, line 2, delete “specific” and insert --specified--.

The errors were found in the claims as amended by applicant.

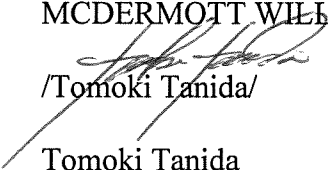
The errors now sought to be corrected are inadvertent typographical errors the correction of which does not involve new matter or require reexamination.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Please charge our Deposit Account No. 50-0417 in the amount of \$150.00 covering the fee set forth in 37 C.F.R. § 1.20(a). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0417, under Order No. 093265-0037.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP


/Tomoki Tanida/

Tomoki Tanida
Registration No. 60,453

The McDermott Building
500 North Capitol Street, NW
Washington, DC 20001-1531
Phone: (202) 756-8196 TT:pm
Facsimile: (202) 756-8087
Date: April 24, 2019

**Please recognize our Customer No. 20277 as
our correspondence address.**

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 8,982,086
APPLICATION NO. : 14/154,993
ISSUE DATE : March 17, 2015
INVENTOR(S) : Masaaki YAMADA

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At Column 8, claim 1, line 17, delete "registering" and insert --identification--.

At Column 9, claim 4, line 2, delete "specific" and insert --specified--.

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):

Tomoki Tanida
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, NW
Washington, DC 20001-1531

093265-0037

Electronic Patent Application Fee Transmittal				
Application Number:		14154993		
Filing Date:		14-Jan-2014		
Title of Invention:		INFORMATION PROCESSING APPARATUS		
First Named Inventor/Applicant Name:		Masaaki YAMADA		
Filer:		Tomoki Tanida/Pamela Morris		
Attorney Docket Number:		093265-0037		
Filed as Large 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:				
CERTIFICATE OF CORRECTION	1811	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				150

Electronic Acknowledgement Receipt

EFS ID:	35818329
Application Number:	14154993
International Application Number:	
Confirmation Number:	3897
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	Masaaki YAMADA
Customer Number:	20277
Filer:	Tomoki Tanida/Pamela Morris
Filer Authorized By:	Tomoki Tanida
Attorney Docket Number:	093265-0037
Receipt Date:	24-APR-2019
Filing Date:	14-JAN-2014
Time Stamp:	16:23:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 150
RAM confirmation Number	042519INTEFSW00003112500417
Deposit Account	500417
Authorized User	Pamela Morris

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 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance 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	Request for Certificate of Correction	093265_0037_Request_for_CO C.pdf	70864	no	3
			9c4021f5e76a341bd44a6aba6c87669540a 9673a		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30085	no	2
			414c78fe2c02f0e047b030d98976048d0fe7 b206		

Warnings:

Information:

Total Files Size (in bytes):	100949
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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.

AO 120 (Rev. 08/10)

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☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 5:18-CV-33	DATE FILED 3/2/2018	U.S. DISTRICT COURT for the Eastern District of Texas, Texarkana Division
PLAINTIFF MAXELL, LTD.		DEFENDANT HUAWEI DEVICE USA, INC., and HUAWEI DEVICE CO., LTD.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
6 7,995,897	8/9/2011	Maxell, Ltd.
7 6,347,068	2/12/2002	Maxell, Ltd.
8 6,973,334	12/6/2005	Maxell, Ltd.
9 9,544,517	1/10/2017	Maxell, Ltd.
10 7,515,810	4/7/2009	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY		
	☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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PLAINTIFF MAXELL, LTD.		DEFENDANT ZTE CORP. and ZTE USA, INC.
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2 7,068,503	6/27/2006	Maxell, Ltd.
3 8,982,086	3/17/2015	Maxell, Ltd.
4 6,928,306	8/9/2005	Maxell, Ltd.
5 6,983,140	1/3/2006	Maxell, Ltd.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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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.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/154,993	03/17/2015	8982086	093265-0037	3897

20277 7590 02/25/2015
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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 Application Information Retrieval (PAIR) WEB site (<http://pair.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 Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Hitachi Consumer Electronics Co., Ltd., Tokyo, JAPAN, Assignee (with 37 CFR 1.172 Interest);
Masaaki YAMADA, Yokohama, JAPAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

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

MCDERMOTT WILL & EMERY LLP
500 North Capitol Street, N.W
Washington, DC 20001

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/154,993	01/14/2014	Masaaki YAMADA	093265-0037	3897

TITLE OF INVENTION: INFORMATION PROCESSING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960.00	0.00	0.00	\$960.00	03/08/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
M. A. Faragalla	2624	345-173000

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/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form 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 | McDermott Will & Emery LLP |
| 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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

HITACHI MAXELL, LTD.

OSAKA, JAPAN

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

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 50-0417 (enclose an extra copy of this form).

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

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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 _____ /Tomoki Tanida/
Typed or printed name _____ Tomoki Tanida

Date February 9, 2015
Registration No. 60,453

Electronic Patent Application Fee Transmittal

Application Number:	14154993			
Filing Date:	14-Jan-2014			
Title of Invention:	INFORMATION PROCESSING APPARATUS			
First Named Inventor/Applicant Name:	Masaaki YAMADA			
Filer:	Tomoki Tanida/barbie beavers			
Attorney Docket Number:	093265-0037			
Filed as Large 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:				
Utility Appl Issue Fee	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt

EFS ID:	21435530
Application Number:	14154993
International Application Number:	
Confirmation Number:	3897
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	Masaaki YAMADA
Customer Number:	20277
Filer:	Tomoki Tanida/barbie beavers
Filer Authorized By:	Tomoki Tanida
Attorney Docket Number:	093265-0037
Receipt Date:	09-FEB-2015
Filing Date:	14-JAN-2014
Time Stamp:	12:06:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 960
RAM confirmation Number	9986
Deposit Account	500417
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 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	Issue Fee Payment (PTO-85B)	ISSUEFEETRANSMITTAL.pdf	31870	no	1
			ee52e012df48104c66f4b08a27de86c3633975f0		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30528	no	2
			77cbe2e58db9179d072c1cd7ee4a8aec72112650		

Warnings:

Information:

Total Files Size (in bytes):			62398
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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.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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NOTICE OF ALLOWANCE AND FEE(S) DUE

20277 7590 12/08/2014
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

EXAMINER

FARAGALLA, MICHAEL A

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 12/08/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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14/154,993

01/14/2014

Masaaki YAMADA

093265-0037

3897

TITLE OF INVENTION: INFORMATION PROCESSING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	03/09/2015

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 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity 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 and an extra copy of the form should be submitted. 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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

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

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.

20277 7590 12/08/2014
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/154,993	01/14/2014	Masaaki YAMADA	093265-0037	3897

TITLE OF INVENTION: INFORMATION PROCESSING APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	03/09/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
FARAGALLA, MICHAEL A	2624	345-173000

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/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form 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, 1 _____
- (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. 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 has been filed for recordation as set forth in 37 CFR 3.11. 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. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

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

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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. _____



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.
14/154,993	01/14/2014	Masaaki YAMADA	093265-0037	3897

20277 7590 12/08/2014
MCDERMOTT WILL & EMERY LLP
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500 North Capitol Street, N.W.
WASHINGTON, DC 20001

EXAMINER

FARAGALLA, MICHAEL A

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 12/08/2014

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 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, 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. 14/154,993	Applicant(s) YAMADA, MASAOKI	
	Examiner MICHAEL FARAGALLA	Art Unit 2624	AIA (First Inventor to File) 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 the amendment filed by applicant on 08/08/2014.
☐ 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 8-11. 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) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/MICHAEL FARAGALLA/
Primary Examiner, Art Unit 2624

DETAILED ACTION

Allowable Subject Matter

1. Claims 8-11 are allowed.
2. The following is an examiner's statement of reasons for allowance: Please see applicant's arguments submitted on 08/08/2014; page 5.

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."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL FARAGALLA whose telephone number is (571)270-1107. The examiner can normally be reached on Mon-Fri 7:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kent Chang can be reached on 571-272-7667. 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.

/MICHAEL FARAGALLA/
Primary Examiner, Art Unit 2624

12/01/2014

Search Notes 	Application/Control No. 14154993	Applicant(s)/Patent Under Reexamination YAMADA, MASAOKI
	Examiner MICHAEL FARAGALLA	Art Unit 2624

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	173, 175, 178, 650, 690	10/07/2013	M.F.

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search	10/07/2013	M.F.
Updated search	12/01/2014	M.F.

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
See attached search strategy		12/01/2014	M.F.

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Issue Classification 	Application/Control No. 14154993	Applicant(s)/Patent Under Reexamination YAMADA, MASAOKI	
	Examiner MICHAEL FARAGALLA	Art Unit 2624	

CPC						
Symbol					Type	Version
G06F		3	/	04842	F	2013-01-01
G06F		1	/	1626	I	2013-01-01
G06F		3	/	0416	I	2013-01-01
G06F		3	/	0488	I	2013-01-01
G06F		21	/	31	I	2013-01-01
G06F		3	/	0412	I	2013-01-01
G06F		2221	/	2109	A	2013-01-01
G06F		2221	/	2117	A	2013-01-01
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CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
		4	
(Assistant Examiner) /MICHAEL FARAGALLA/ Primary Examiner.Art Unit 2624 (Primary Examiner)	(Date) 12/1/2014 (Date)	O.G. Print Claim(s)	O.G. Print Figure
		8	8

Issue Classification 	Application/Control No. 14154993	Applicant(s)/Patent Under Reexamination YAMADA, MASA AKI
	Examiner MICHAEL FARAGALLA	Art Unit 2624

☐ Claims renumbered in the same order as presented by applicant															
☐ CPA															
☐ T.D.															
☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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3	10														
4	11														

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	4	
/MICHAEL FARAGALLA/ Primary Examiner.Art Unit 2624	12/1/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	8	8

Receipt date: 11/28/2014

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14154993 - GAIL: 2624

Approved for use through 07/31/2012. 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		14154993	
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	2624		
	Examiner Name	M. A. Faragalla		
	Attorney Docket Number	093265-0037		

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					

If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
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	20070250786	A1	2007-10-25	Jeon et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	201101130	TW	A1	2011-01-01		w/English language Abstract	☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

Add

NON-PATENT LITERATURE DOCUMENTS			Remove
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

Receipt date: 11/28/2014 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14154993	14154993 - GAU: 2624
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	2624		
	Examiner Name	M. A. Faragalla		
	Attorney Docket Number	093265-0037		

1	Office Action Chinese Serial No. 2014062700460410 dated July 2, 2014.	☐
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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	/Michael Faragalla/	Date Considered	12/01/2014
--------------------	---------------------	-----------------	------------

***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.

Receipt date: 11/28/2014 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14154993	14154993 - GAU: 2624
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	2624		
	Examiner Name	M. A. Faragalla		
	Attorney Docket Number	093265-0037		

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	/Tomoki Tanida/	Date (YYYY-MM-DD)	2014-11-28
Name/Print	Tomoki Tanida	Registration Number	60453

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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.
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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.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	10	(panel with registering with mode).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/12/01 13:55
L2	452	(panel with registering).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/12/01 13:56
L3	11	(panel with registering with identification).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/12/01 13:56
L4	2	(panel with registering with coincident).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/12/01 13:56
L5	0	(panel with registering with coincident with input).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/12/01 13:56
L6	0	(panel with registering with coincident with operating with modes).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/12/01 13:57

12/ 1/ 2014 1:57:35 PM

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14154993	
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	2624		
	Examiner Name	M. A. Faragalla		
	Attorney Docket Number	093265-0037		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14154993
	Filing Date		2014-01-14
	First Named Inventor	Masaaki YAMADA	
	Art Unit	2624	
	Examiner Name	M. A. Faragalla	
	Attorney Docket Number	093265-0037	

1	Office Action Chinese Serial No. 2014062700460410 dated July 2, 2014.	☐
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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	14154993
Filing Date	2014-01-14
First Named Inventor	Masaaki YAMADA
Art Unit	2624
Examiner Name	M. A. Faragalla
Attorney Docket Number	093265-0037

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).

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項番.1 一覧 前 次 全文 レイアウト 印刷 メモ 評価・分類 引用 最新書誌 経過監視 ファミリ 翻訳

◎○△× 評価:

TW201101130A 2011/01/01 TW98120269A 2009/06/17

AU OPTRONICS CORP (TW) [LIU CHUN TING (TW)]

G06F 3/041 (2006.01)

Touch operation method and operation method of electronic device

[57]ABSTRACT:

A touch operation method and an operation method of electronic device are provided. The touch operation method comprises the steps of determining whether an await selection object of a touch panel is touched. Secondly, the step of outputting a floating menu corresponding to an attribute of the await selection object when a touch time of the touched await selection object reaches a first predetermined time. Then, the step of determining whether one of a plurality of menu fields in the floating menu is selected. Thus, the step of performing a first order corresponding to the selected menu field when one of the plurality of menu fields in the floating menu is selected. Besides, the electronic device performs a second order corresponding to the selected menu field when the touch time of the selected menu field reaches a predetermined time.



[1]件表示しました。



(19)中華民國智慧財產局

(12)發明說明書公開本

(11)公開編號：TW 201101130 A1

(43)公開日：中華民國 100 (2011) 年 01 月 01 日

(21)申請案號：098120269

(22)申請日：中華民國 98 (2009) 年 06 月 17 日

(51)Int. Cl. : **G06F3/041 (2006.01)**

(71)申請人：友達光電股份有限公司 (中華民國) AU OPTRONICS CORP. (TW)

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(72)發明人：劉軍廷 LIU, CHUN TING (TW)；傅光宇 FU, KUANG YU (TW)；周明忠 JOU, MING JONG (TW)

(74)代理人：楊大德

申請實體審查：有 申請專利範圍項數：23 項 圖式數：4 共 24 頁

(54)名稱

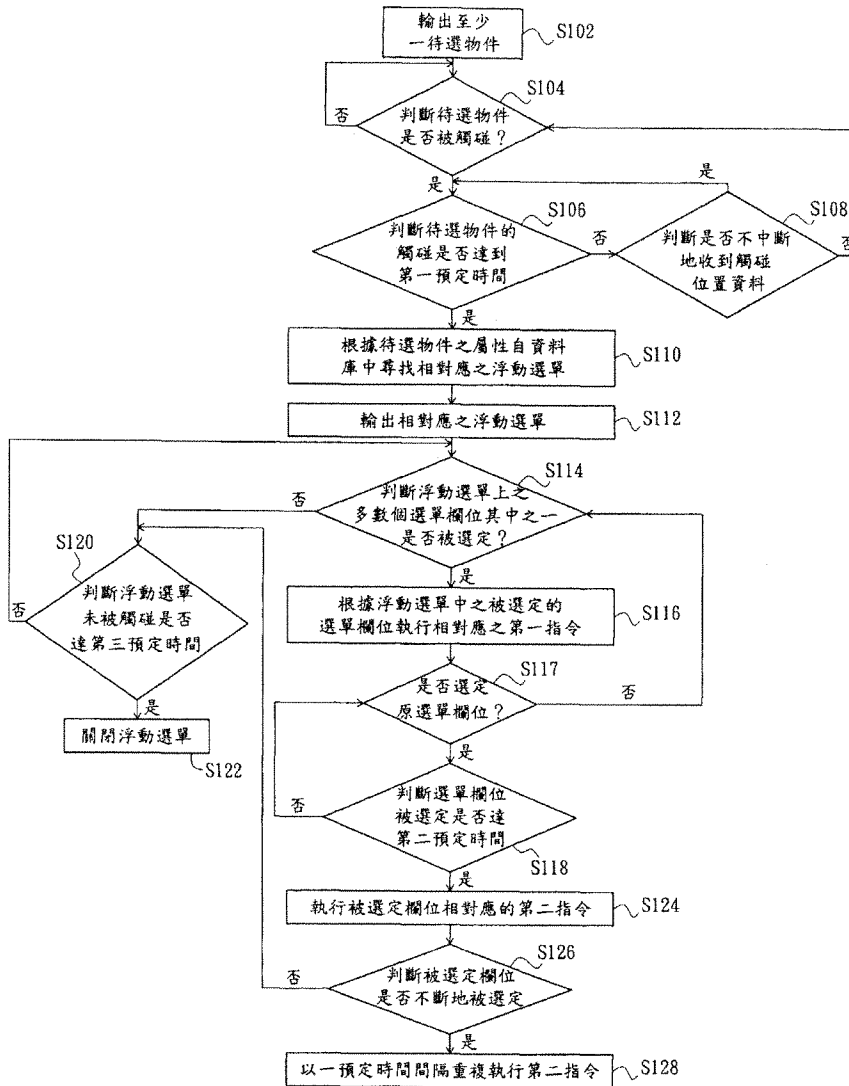
觸碰操作方法與電子裝置之操作方法

TOUCH OPERATION METHOD AND OPERATION METHOD OF ELECTRONIC DEVICE

(57)摘要

一種觸碰操作方法與電子裝置之操作方法，此觸碰操作方法包括判斷顯示於觸控螢幕上之待選物件是否被觸碰。其次，當待選物件被觸碰達第一預定時間時，則根據待選物件之屬性輸出相對應之浮動選單。接著，判斷浮動選單上之多數個選單欄位其中之一是否被選定，並於當該動選單上之選單欄位其中之一被選定時，則根據被選定的選單欄位執行相對應之第一指令。另外，當被選定之選單欄位被選定達第二預定時間時，則執行被選定之選單欄位所對應的第二指令。

S102 ~ S128：各個
步驟流程



六、發明說明：

【發明所屬之技術領域】

本發明是有關於一種觸控螢幕的操作方法，且特別是有關於一種觸碰操作方法與電子裝置之操作方法。

【先前技術】

在現今各式消費性電子產品的市場中，個人數位助理(PDA)、行動電話(mobile Phone)、筆記型電腦(notebook)及平板電腦(tablet PC)等可攜式電子產品皆已廣泛的使用觸控式面板(touch panel)作為其資料溝通的界面工具。此外，由於目前電子產品的設計皆以輕、薄、短、小為方向，因此在產品上無足夠空間容納如鍵盤、滑鼠等傳統輸入裝置，尤其在講求人性化設計的平板電腦需求的帶動下，觸控式面板已經一躍成為關鍵的零組件之一。而且觸控式面板除了符合可作多層次選單設計要求外，亦能同時擁有鍵盤，滑鼠等的功能及手寫輸入等人性化的操作方式，尤其將輸入與輸出整合在同一介面(螢幕)的特質，更是其他傳統輸入裝置所不及之處。

在習知之觸控螢幕中，使用者在對電子裝置內之檔案進行操作時可以例如是對觸控螢幕上所顯示的選單進行選擇或是利用電子裝置上配置的硬體操作鍵進行操作。因此，習知的觸控螢幕上僅能列出一般文件或檔案共同的固定式功能選單，而無法針對不同屬性的文件或檔案有不同的功能選單。而使用者在操作時，則需要反覆的移動於選單與物件間，若是過程中有不慎誤觸的情況，甚至可能得一切重來。

為了改善以上的缺點，如美國專利公告號第 7479949 號所述，其觸控螢幕的操作方法係為利用單點或多點觸控的方式來對觸控螢幕進行操作。以多點觸控為例，使用者可以利用兩根手指頭在觸控螢幕上的移動軌跡來對觸控螢幕上的照片進行

放大與縮小；以單點觸控為例時，使用者可以利用手指的向左滑動來觀看上一頁的檔案或是向右滑動來觀看上一頁的檔案。如此之設計的確給使用者帶來了使用上的便利性，但缺點就是使用者必須先熟記多組操作的手勢，而且電子裝置在判斷手勢時也可能因為物體觸碰的力道不足或方向有所偏差導致誤判，而使得使用者得重新再作一次手勢。

【發明內容】

本發明的目的就是在提供一種觸碰操作方法，其係在觸控螢幕被觸控時輸出浮動選單，以讓使用者輕易地即可操作物件，而減少手勢操作時誤動作。

本發明的再一目的是提供一種電子裝置之操作方法，其可讓使用者無須背誦電子裝置的操作手勢，還能讓使用者能順利的操作此電子裝置，因此可有效提升觸控螢幕使用便利性。

本發明提出一種觸碰操作方法，其係適用於觸控螢幕上。此觸碰操作方法包括判斷顯示於觸控螢幕上之一待選物件是否被觸碰。其次，當待選物件被觸碰達第一預定時間時，則根據待選物件之屬性輸出相對應之浮動選單。接著，判斷浮動選單上之多數個選單欄位其中之一是否被選定，並於當該動選單上之選單欄位其中之一被選定時，則根據被選定的選單欄位執行相對應之第一指令。另外，當被選定之選單欄位被選定達第二預定時間時，則執行被選定之選單欄位所對應的第二指令。

在本發明的較佳實施例中，上述之輸出浮動選單之步驟包括以待選物件被觸碰之點為基礎而輸出浮動選單。

在本發明的較佳實施例中，上述之當被選定之選單欄位被選定達第二預定時間時，則執行被選定之選單欄位所對應的第二指令之步驟包括判斷被選定之選單欄位在被選定達第二預

定時間後是否仍不中斷地被選定，然而當被選定之選單欄位仍不中斷地被選定時，則以預定時間間隔重複執行第二指令。

本發明另提出一種電子裝置之操作方法，此電子裝置包括觸控螢幕，且觸控螢幕上顯示有至少一個待選物件。該電子裝置之操作方法包括當待選物件被觸碰達第一預定時間時，則根據待選物件之屬性輸出相對應之浮動選單。其次，當浮動選單上之多數個選單欄位其中之一被選定未達第二預定時間時，則根據被選定的選單欄位執行相對應之第一指令，而當被選定的選單欄位被選定達第二預定時間時，則執行被選定之選單欄位所對應的第二指令。其中，第一預定時間小於第二預定時間。

本發明因在觸控螢幕被觸控時輸出浮動選單，使用者則無須背誦電子裝置的操作手勢即可輕易地操作物件，不但能減少手勢操作時的誤動作，還可有效提升觸控螢幕使用便利性。

為讓本發明之上述和其他目的、特徵和優點能更明顯易懂，下文特舉較佳實施例，並配合所附圖式，作詳細說明如下。

【實施方式】

請參照圖 1，其繪示根據本發明一實施例之觸碰操作方法的步驟流程圖。在本實施例中，此觸碰操作方法係為適用於電子裝置的觸控螢幕上，當電子裝置被致能後，電子裝置則於觸控螢幕上顯示至少一個待選物件（步驟 S102），或是當使用者於觸控螢幕上任一處觸碰後，觸控螢幕即上顯示至少一個待選物件，亦可以是電子裝置或觸控螢幕上有某個特定的功能鍵，當此功能鍵被按下時，觸控螢幕即上顯示至少一個待選物件。當然，顯示待選物件之方式，自當不以此為限。

在本發明之較佳實施例中，此待選物件可以例如是照片、影音檔、文件檔、電子郵件或是其他可由使用者進行觀賞或編

輯之檔案。

在本實施例中，當待選物件被輸出至觸控螢幕後，電子裝置則判斷待選物件是否被觸碰（步驟 S104）。請參照圖 2，其繪示根據本發明一實施例之觸碰操作方法中之判斷待選物件是否被觸碰的步驟流程圖。在圖 2 中，當電子裝置接收到觸碰位置資料（步驟 S202）後，則對觸碰位置資料作座標轉換運算（步驟 S204）。其中，在觸控螢幕的顯示畫面上，其本身已有定義的座標規格，因此電子裝置將觸碰位置資料換算成已定義的座標規格後，得到觸碰點相對應的座標位置。由於在觸控螢幕上所顯示之待選物件係具有一範圍，以四邊形的待選物件為例，其將具有代表其範圍的四個座標位置。因此，電子裝置於得到觸碰點的座標位置後即根據此座標位置與觸控螢幕上的每個待選物件的範圍作匹配，藉此判斷觸碰點的座標位置落於哪個待選物件的範圍中（步驟 S206）。

當觸碰點的座標位置落於某個待選物件的範圍中時，電子裝置則定義此待選物件已被使用者選定（步驟 S210），並回到步驟 S104。反之，當觸碰點的座標位置未落於任何一個待選物件的範圍中時，電子裝置則定義使用者未選定任何待選物件，並回到步驟 S202。

請繼續參照圖 1，當待選物件被選定後，電子裝置接著判斷使用者於待選物件上的觸碰是否達到第一預定時間（步驟 S106）。在此判斷中，可利用上述之觸碰點的座標位置是否一直落於相同的待選物件的範圍內作判斷。當判斷得知於待選物件上的觸碰尚未達到第一預定時間時，則判斷電子裝置是否不中斷地收到觸碰位置資料（步驟 S108）。亦即，判斷所收到的觸碰位置資料於轉換成座標位置後，是否均落於相同的待選

物件的範圍內。當判斷得知持續收到的觸碰位置資料均落於相同的待選物件的範圍內時，則定義為不中斷地收到觸碰位置資料，並回到步驟 S106。反之，當前後的觸碰位置資料落於不同的待選物件的範圍內時，則回到步驟 S104。

在本實施例中，在確認被觸碰的待選物件後，則根據待選物件之屬性至電子裝置之資料庫中選找與此待選物件相對應之浮動選單（步驟 S110）。其中，不同屬性的待選物件將會有不同的浮動選單，以照片檔與影音檔作比較，照片檔將會有放大、縮小、旋轉之功能，但影音檔則可能沒有相應的功能。反之，影音檔將會有播放、快轉、倒退之功能，而照片檔則可能沒有相應的功能。

電子裝置於尋找到相對應之浮動選單後，則輸出浮動選單至觸控螢幕上（步驟 S112）。輸出浮動選單之方式則可以例如是以待選物件被觸碰之點為基礎而輸出浮動選單、將浮動選單輸出至觸控螢幕之中心位置或是將浮動選單上的選單欄位分別輸出至觸控螢幕的各角落。其中，浮動選單一般可以具有多個選單欄位。接著，電子裝置則判斷浮動選單上之任一選單欄位是否被選定（步驟 S114）。

在步驟 S114 中，一種可能的做法是當輸出浮動選單時以觸碰點為原點，使用者於選擇選單欄位不必特別用手指去觸碰選單欄位，只需於原點上施予側向壓力即可選擇不同的選單欄位。例如，最初時原點所代表之位置係為浮動選單的中心位置，亦即浮動選單中位於中間的選單欄位（可採反白表示，以使用者知道目前的位置）。當對原點施予的壓力被判定為是施力方向往畫面下緣的側向壓力時，則電子裝置將認為使用者所選擇的是位於中間選單欄位下方的選單欄位（具體是哪一個欄

位則視側向壓力的存在時間以及電子裝置每隔多久進行一次判斷而定)。因此，使用者可以利用各種方向的側向壓力來選擇不同的選單欄位。其中，當電子裝置於偵測原點的側向壓力時，則對此側向壓力作方向指標運算並得到一個方向指標。接著，即根據方向指標所指之方向以及按壓的時間長度來定義相對應之選單欄位為被選定之選單欄位。

在步驟 S114 中確認被選定的選單欄位時，電子裝置即根據此選單欄位所代表之功能執行相對應的第一指令（步驟 S116）。其次，則判斷是否選定原選單欄位（步驟 S117），亦即電子裝置將判斷使用者是否持續選擇相同的選單欄位。當使用者持續選擇相同的選單欄位時，電子裝置將進一步判斷被選定之選單欄位被選定是否達第二預定時間（步驟 S118）。

其中，判斷是否選定原選單欄位之步驟可以是電子裝置收到觸碰位置資料後，則對觸碰位置資料進行座標轉換，以得到目前觸碰點的座標位置。接著判斷目前觸碰點的座標位置是否落於已執行第一指令之選單欄位之範圍內。當判斷得知目前觸碰點的座標位置落於已執行第一指令之選單欄位之範圍內時，則定義為原選單欄位持續被選定。另外，當目前觸碰點的座標位置未落於已執行第一指令之選單欄位之範圍內時，電子裝置則僅執行第一指令，並回到步驟 S114。當浮動選單未被觸碰且時間達到第三預定時間時，則關閉浮動選單（步驟 S122），並回到步驟 S104。反之，當浮動選單未被觸碰的時間未達到第三預定時間時，則回到步驟 S114，並判斷是否有選單欄位被選定。如無選單欄位被選定時，則至步驟 S120。

在本實施例中，當被選定之選單欄位被選定達第二預定時間時，電子裝置則執行被選定欄位相對應的第二指令（步驟

S124)。其中，第一指令可以例如是與第二指令相同，亦可不同，其端視設計者之需要而定。

電子裝置於執行第二指令後，則不中斷地判斷被選定的選單欄位是否持續被選定（步驟 S126）。其中，判斷方式為電子裝置收到觸碰位置資料後，則對觸碰位置資料進行座標轉換，以得到目前觸碰點的座標位置。接著判斷目前觸碰點的座標位置是否落於被選定的選單欄位之範圍內。當判斷得知目前觸碰點的座標位置落於被選定的選單欄位之範圍內時，則以一預定時間間隔重複執行第二指令（步驟 S128）。反之，當被選定的選單欄位未持續被選定時，則到步驟 S120。

請參照圖 3A 與 3B，其分別繪示本發明一實施例之於觸控螢幕上輸出浮動選單之示意圖以及本發明一實施例之浮動選單之選單欄位被選定並執行對應指令之示意圖。在圖 3A 中，觸控螢幕 302 上係顯示有待選物件 304~310 以及浮動選單 312。其中，如觸控螢幕 302 上之手指 314 觸碰到待選物件 304 之後，電子裝置則進行如圖 1 之步驟 S104~S112，以將浮動選單 312 顯示於觸控螢幕 302 上。其中，浮動選單 312 係具有多個選單欄位，且可以例如是電子郵件、縮小（zoom out）、全螢幕、逆時針旋轉（rotate CCW）、取消（cancel）、順時針旋轉（rotate CW）、刪除（delete）、放大（zoom in）以及編輯（edit）。

請繼續參照圖 3B，當手指 314 觸碰逆時針旋轉（rotate CCW）之選單欄位時，則電子裝置執行圖 1 之步驟 S116，使待選物件 304 逆時針旋轉。當手指 314 持續觸碰逆時針旋轉（rotate CCW）之選單欄位，且時間達第二預定時間時，則電子裝置執行圖 1 之步驟 S124。其中，第一指令可能是使待選

物件 304 逆時針旋轉 45 度，而第二指令亦可以是使待選物件 304 逆時針旋轉 45 度或 1 度。而在手指 314 觸碰逆時針旋轉 (rotate CCW) 之選單欄位的時間達第二預定時間後，則電子裝置可以例如是每 0.5 秒就使待選物件 304 逆時針旋轉 45 度或 1 度，直至手指 314 離開觸控螢幕 302 為止，但均不以此為限。

請參照圖 4A~4D，其係分別繪示本發明另一實施例之觸控螢幕上輸出多個待選物件之示意圖、本發明另一實施例之觸控螢幕上出現浮動選單之示意圖、本發明另一實施例之執行選單欄位對應指令之示意圖以及本發明另一實施例之執行選單欄位另一對應指令之示意圖。在圖 4A 中，觸控螢幕 402 上係具有待選物件 404~410 以及手指 414。當手指 414 觸碰到待選物件 404 時，電子裝置則將圖 3A 之浮動選單拆散，而將選單欄位 412a~412d 分別輸出至觸控螢幕 402 的四個角落（如圖 4B 所示）。其中，為方便說明，本實施例僅以四個選單欄位 412a~412d 為例作說明，但實際上自當不以此為限。

在本實施例中，在輸出選單欄位 412a~412d 的同時，電子裝置亦將待選物件 404 移至觸控螢幕 402 的中心位置，並將待選物件 406~410 移至邊緣處，此僅為本發明之一實施例，但實際上仍須視設計者之需求而定。

在圖 4C 中，當手指 414 觸碰選單欄位 412a (rotate CCW) 時，則待選物件 404 則電子裝置執行圖 1 之步驟 S116，使待選物件 404 逆時針旋轉。當手指 414 持續觸碰選單欄位 412a，且時間達第二預定時間時，則電子裝置執行圖 1 之步驟 S124。而在手指 414 觸碰選單欄位 412a 的時間達第二預定時間後，則電子裝置即執行圖 1 之步驟 S128。

在圖 4D 中，當手指 414 觸碰選單欄位 412d (zoom in) 時，則電子裝置執行圖 1 之步驟 S116，使待選物件 404 放大。當手指 414 持續觸碰選單欄位 412a，且時間達第二預定時間時，則電子裝置執行圖 1 之步驟 S124。而在手指 414 觸碰選單欄位 412a 的時間達第二預定時間後，則電子裝置即執行圖 1 之步驟 S128。

綜上所述，在本發明之觸碰操作方法與電子裝置之操作方法，其係在觸控螢幕被觸控時輸出一浮動選單，因此使用者無須背誦電子裝置的操作手勢即可輕易地操作物件，不但能減少手勢操作時的誤動作，還可有效提升觸控螢幕使用便利性。

雖然本發明已以較佳實施例揭露如上，然其並非用以限定本發明，任何熟習此技藝者，在不脫離本發明之精神和範圍內，當可作些許之更動與潤飾，因此本發明之保護範圍當視後附之申請專利範圍所界定者為準。

【圖式簡單說明】

圖 1 繪示本發明一實施例之觸碰操作方法的步驟流程圖。

圖 2 繪示本發明一實施例之觸碰操作方法中之判斷待選物件是否被觸碰的步驟流程圖。

圖 3A 繪示本發明一實施例之於觸控螢幕上輸出浮動選單之示意圖。

圖 3B 繪示本發明一實施例之浮動選單之選單欄位被選定並執行對應指令之示意圖。

圖 4A 繪示本發明另一實施例之觸控螢幕上輸出多個待選物件之示意圖。

圖 4B 繪示本發明另一實施例之觸控螢幕上出現浮動選

單之示意圖。

圖 4C 繪示本發明另一實施例之執行選單欄位對應指令之示意圖。

圖 4D 繪示本發明另一實施例之執行選單欄位另一對應指令之示意圖。

【主要元件符號說明】

302、402：觸控螢幕

304、306、308、310、404、406、408、410：待選物件

312、412a、412b、412c、412d：浮動選單

314、414：手指

S102～S128：各個步驟流程

S202～S210：各個步驟流程



發明專利說明書

(本說明書格式、順序，請勿任意更動，※記號部分請勿填寫)

※申請案號： 98120269

※申請日： 98.6.17

※IPC 分類： G06F3/04 (2006.01)

一、發明名稱：(中文/英文)

觸碰操作方法與電子裝置之操作方法 / TOUCH
OPERATION METHOD AND OPERATION METHOD OF
ELECTRONIC DEVICE

二、中文發明摘要：

一種觸碰操作方法與電子裝置之操作方法，此觸碰操作方法包括判斷顯示於觸控螢幕上之待選物件是否被觸碰。其次，當待選物件被觸碰達第一預定時間時，則根據待選物件之屬性輸出相對應之浮動選單。接著，判斷浮動選單上之多數個選單欄位其中之一是否被選定，並於當該動選單上之選單欄位其中之一被選定時，則根據被選定的選單欄位執行相對應之第一指令。另外，當被選定之選單欄位被選定達第二預定時間時，則執行被選定之選單欄位所對應的第二指令。

三、英文發明摘要：

A touch operation method and an operation method of electronic device are provided. The touch operation method comprises the steps of determining whether an await selection object of a touch panel is touched. Secondly, the step of outputting a floating menu corresponding to an attribute of the await selection object when a touch time of the touched await selection object reaches a first predetermined time. Then, the step of determining whether one of a plurality of menu fields in the

floating menu is selected. Thus, the step of performing a first order corresponding to the selected menu field when one of the plurality of menu fields in the floating menu is selected. Besides, the electronic device performs a second order corresponding to the selected menu field when the touch time of the selected menu field reaches a predetermined time.

四、指定代表圖：

(一)本案指定代表圖為：第（ 1 ）圖。

○

(二)本代表圖之元件符號簡單說明：

S102～S128：各個步驟流程

五、本案若有化學式時，請揭示最能顯示發明特徵的化學式：

無

○

七、申請專利範圍：

1.一種觸碰操作方法，係適用於一觸控螢幕上，該觸碰操作方法包括：

判斷顯示於該觸控螢幕上之一待選物件是否被觸碰；

當該待選物件被觸碰達一第一預定時間時，則根據該待選物件之一屬性輸出相對應之一浮動選單；

判斷該浮動選單上之多數個選單欄位其中之一是否被選定；

○ 當該浮動選單上之該些選單欄位其中之一被選定時，則根據該被選定的選單欄位執行相對應之一第一指令；以及

當該被選定之選單欄位被選定達一第二預定時間時，則執行該被選定之選單欄位所對應之一第二指令。

2.如申請專利範圍第 1 項所述之觸碰操作方法，其中判斷該待選物件是否被觸碰之步驟包括：

接收一觸碰位置資料；

對該觸碰位置資料作一座標轉換運算，並得到一座標位置；

○ 判斷該座標位置是否位於該待選物件之範圍內；以及

當該座標位置位於該待選物件之範圍內時，則定義該待選物件已被選定。

3.如申請專利範圍第 2 項所述之觸碰操作方法，更包括：

當該待選物件被觸碰未達該第一預定時間時，則判斷是否不中斷地收到該觸碰位置資料；

當未收到該觸碰位置資料時，則判斷該待選物件是否被觸碰；以及

當不中斷地收到該觸碰位置資料時，則判斷該待選物件是否被觸碰達該第一預定時間。

4.如申請專利範圍第 1 項所述之觸碰操作方法，其中係以該待選物件被觸碰之點為基礎而輸出該浮動選單。

5.如申請專利範圍第 4 項所述之觸碰操作方法，其中判斷該浮動選單上之該些選單欄位其中之一是否被選定之步驟包括：

偵測被觸碰之點之一側向壓力；

對該側向壓力作一方向指標運算，並得到一方向指標；以

及

根據該方向指標以定義相對應之該些選單欄位其中之一為該被選定之選單欄位。

6.如申請專利範圍第 5 項所述之觸碰操作方法，其中當該被選定之選單欄位被選定達該第二預定時間時，則執行該被選定之選單欄位所對應的該第二指令之步驟包括：

判斷該被選定之選單欄位在被選定達該第二預定時間後是否仍不中斷地被選定；以及

當該被選定之選單欄位仍不中斷地被選定時，則以一預定時間間隔重複執行該第二指令。

7.如申請專利範圍第 1 項所述之觸碰操作方法，其中判斷該浮動選單上之該些選單欄位其中之一是否被選定之步驟包括：

偵測被觸碰之點之一側向壓力；

對該側向壓力作一方向指標運算，並得到一方向指標；以

及

根據該方向指標以定義相對應之該些選單欄位其中之一為該被選定之選單欄位。

8.如申請專利範圍第 7 項所述之觸碰操作方法，其中當該

觸控螢幕上之另一待選物件被觸碰時，則關閉該浮動選單。

9.如申請專利範圍第 7 項所述之觸碰操作方法，其中當該被選定之選單欄位被選定達該第二預定時間時，則執行該被選定之選單欄位所對應的該第二指令之步驟包括：

判斷當該被選定之選單欄位在被選定達該第二預定時間後是否仍不中斷地被選定；以及

當該被選定之選單欄位仍不中斷地被選定時，則以一預定時間間隔重複執行該第二指令。

10.如申請專利範圍第 9 項所述之觸碰操作方法，更包括：

當該些選單欄位皆未被選定時，則判斷該些選單欄位皆未被選定的時間是否達一第三預定時間；以及

當該些選單欄位皆未被選定達該第三預定時間時，則關閉該浮動選單。

11.如申請專利範圍第 1 項所述之觸碰操作方法，其中該浮動選單係被輸出至該觸控螢幕之中心位置。

12.如申請專利範圍第 1 項所述之觸碰操作方法，其中該些選單欄位係被輸出至該觸控螢幕的角落。

13.一種電子裝置之操作方法，該電子裝置包括一觸控螢幕，且該觸控螢幕上顯示有至少一待選物件，該電子裝置之操作方法包括：

當該待選物件被觸碰達一第一預定時間時，則根據該待選物件之一屬性輸出相對應之一浮動選單；以及

當該浮動選單上之多數個選單欄位其中之一被選定未達一第二預定時間時，則根據該被選定的選單欄位執行相對應之一第一指令，而當該被選定的選單欄位被選定達該第二預定時間時，則執行該被選定之選單欄位所對應的一第二指令；

其中，該第一預定時間小於該第二預定時間。

14.如申請專利範圍第 13 項所述之電子裝置之操作方法，更包括判斷該浮動選單上之該些選單欄位其中之一是否被選定。

15.如申請專利範圍第 14 項所述之電子裝置之操作方法，其中係以該待選物件被觸碰之點為基礎而輸出該浮動選單。

16.如申請專利範圍第 15 項所述之電子裝置之操作方法，其中判斷該浮動選單上之該些選單欄位其中之一是否被選定之步驟包括：

偵測被觸碰之點之一側向壓力；

對該側向壓力作一方向指標運算，並得到一方向指標；以及

根據該方向指標以定義相對應之該些選單欄位其中之一為該被選定之選單欄位。

17.如申請專利範圍第 16 項所述之電子裝置之操作方法，其中當該被選定之選單欄位被選定達該第二預定時間時，則執行該被選定之選單欄位所對應的該第二指令之步驟包括：

判斷該被選定之選單欄位在被選定達該第二預定時間後是否仍不中斷地被選定；以及

當該被選定之選單欄位仍不中斷地被選定時，則以一預定時間間隔重複執行該第二指令。

18.如申請專利範圍第 13 項所述之電子裝置之操作方法，其中判斷該浮動選單上之該些選單欄位其中之一是否被選定之步驟包括：

偵測被觸碰之點之一側向壓力；

對該側向壓力作一方向指標運算，並得到一方向指標；以

及

根據該方向指標以定義相對應之該些選單欄位其中之一為該被選定之選單欄位。

19.如申請專利範圍第 18 項所述之電子裝置之操作方法，其中當該觸控螢幕上之另一待選物件被觸碰時，則關閉該浮動選單。

20.如申請專利範圍第 19 項所述之電子裝置之操作方法，其中當該被選定之選單欄位被選定達該第二預定時間時，則執行該被選定之選單欄位所對應的該第二指令之步驟包括：

判斷當該被選定之選單欄位在被選定達該第二預定時間後是否仍不中斷地被選定；以及

當該被選定之選單欄位仍不中斷地被選定時，則以一預定時間間隔重複執行該第二指令。

21.如申請專利範圍第 20 項所述之電子裝置之操作方法，更包括：

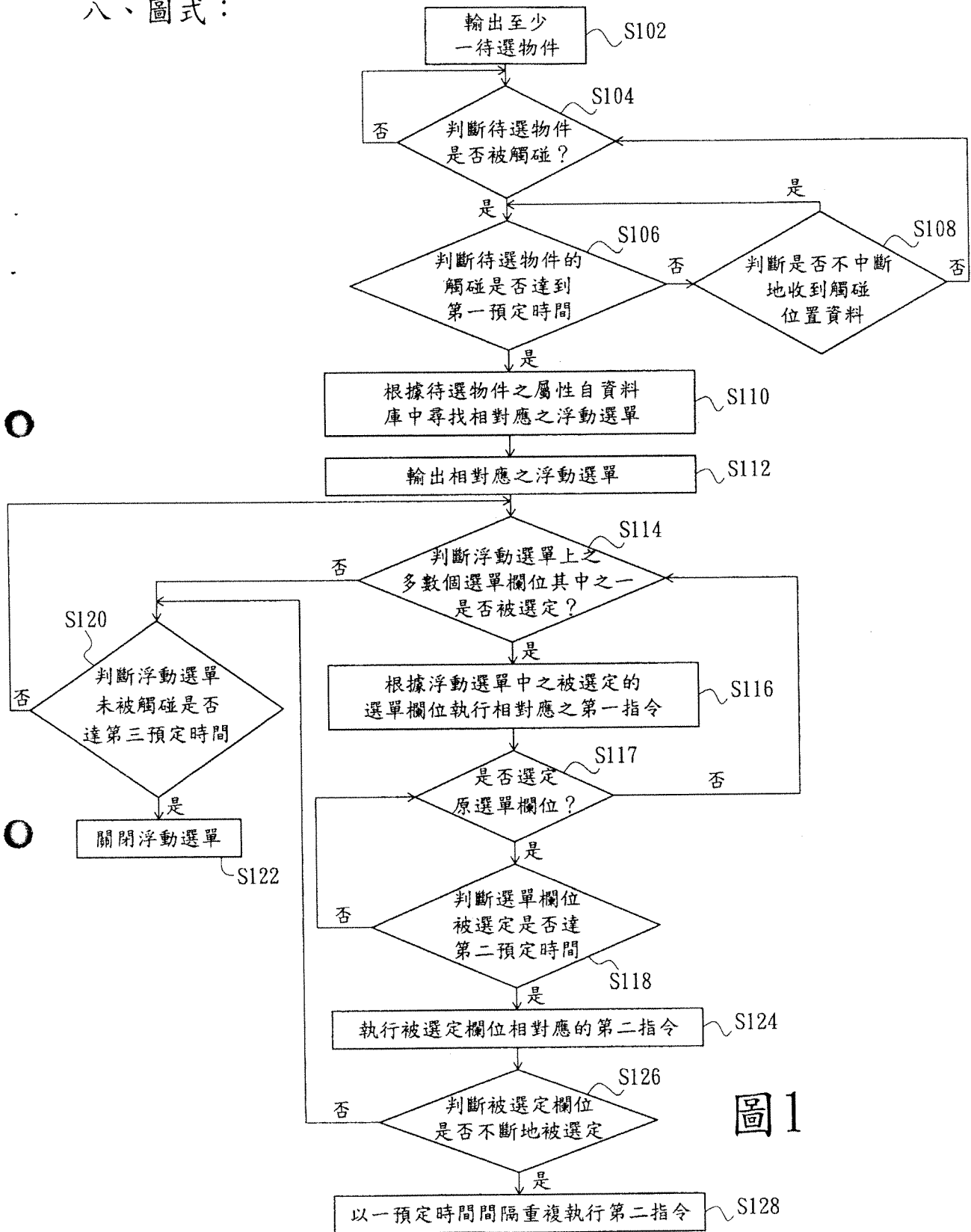
當該些選單欄位皆未被選定時，則判斷該些選單欄位皆未被選定的時間是否達一第三預定時間；以及

當該些選單欄位皆未被選定達該第三預定時間時，則關閉該浮動選單。

22.如申請專利範圍第 13 項所述之電子裝置之操作方法，其中該浮動選單係被輸出至該觸控螢幕之中心位置。

23.如申請專利範圍第 13 項所述之電子裝置之操作方法，其中該些選單欄位係被分散於該觸控螢幕的角落。

八、圖式：



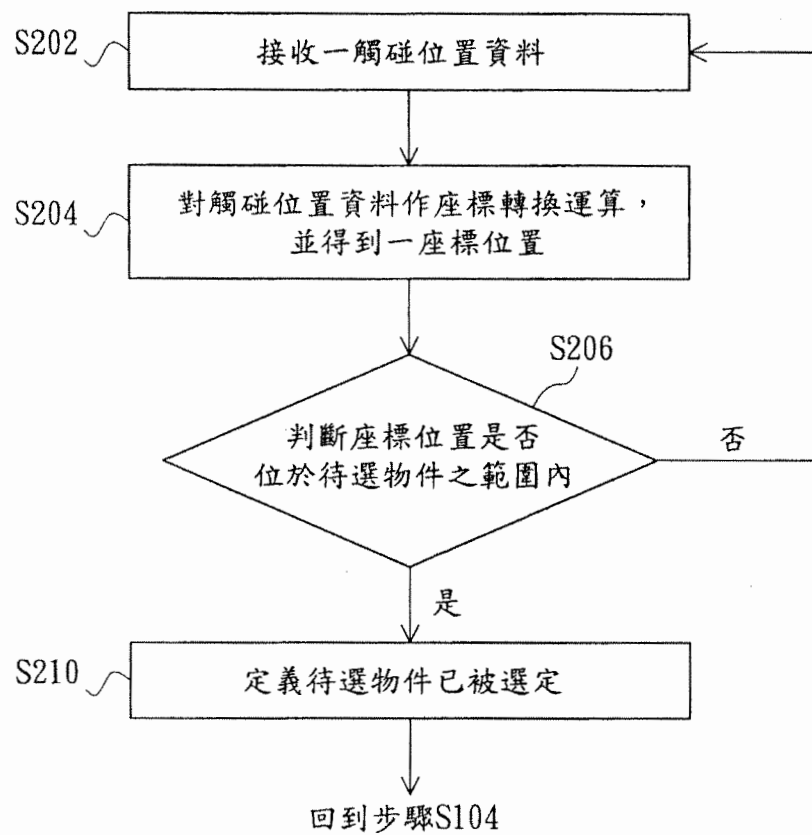


圖2

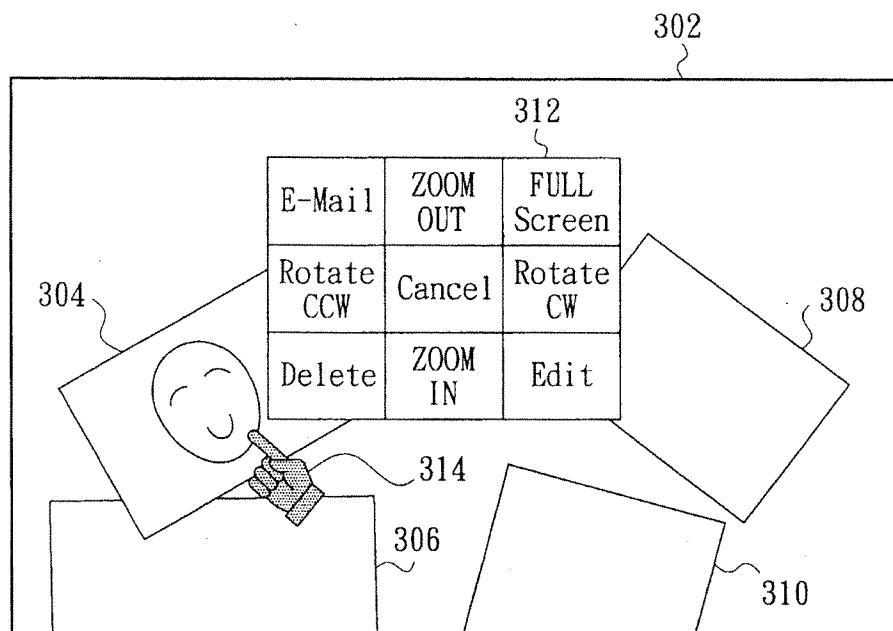


圖 3A

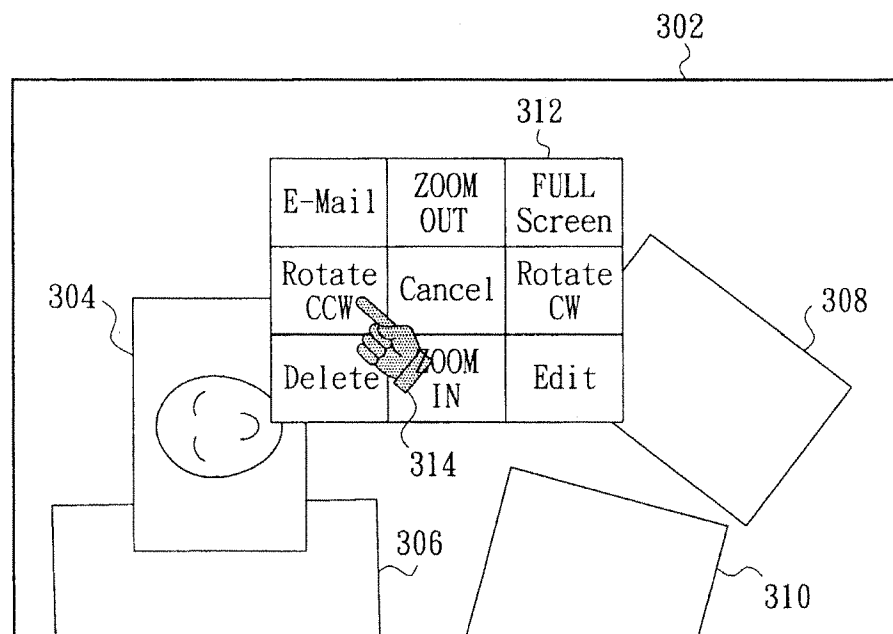


圖 3B

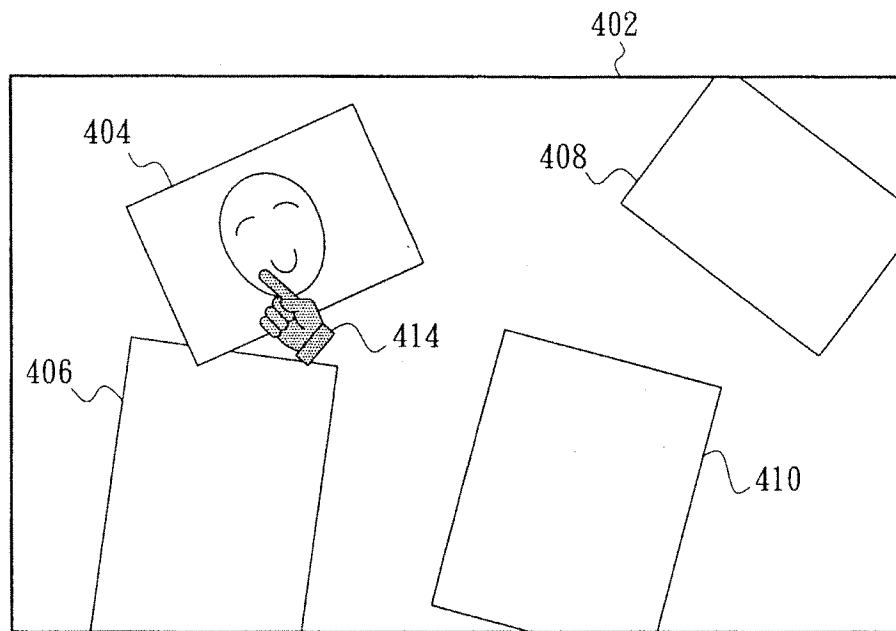


圖 4A

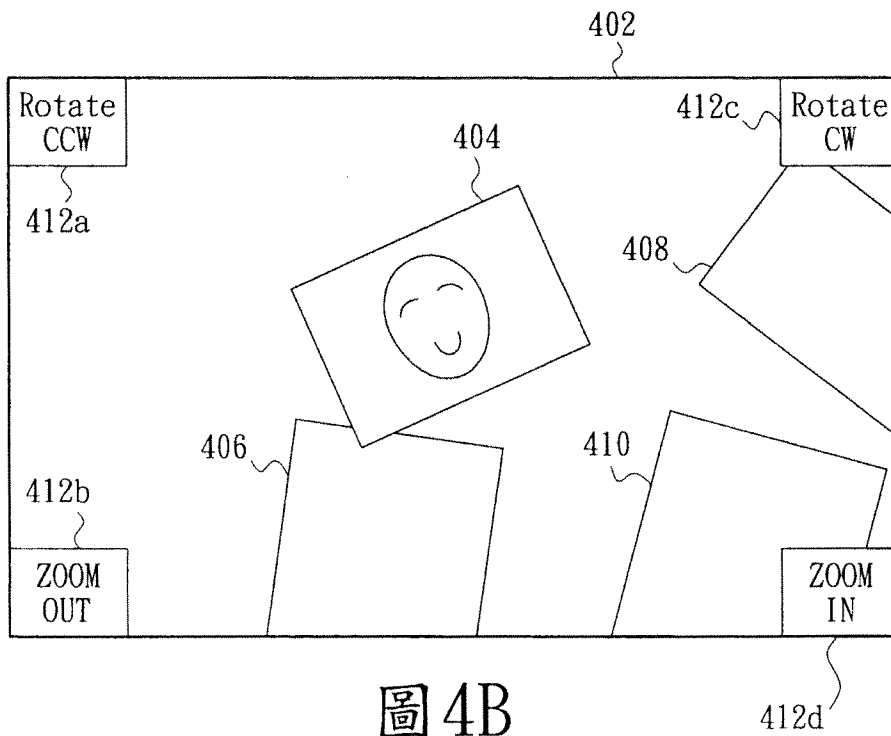


圖 4B

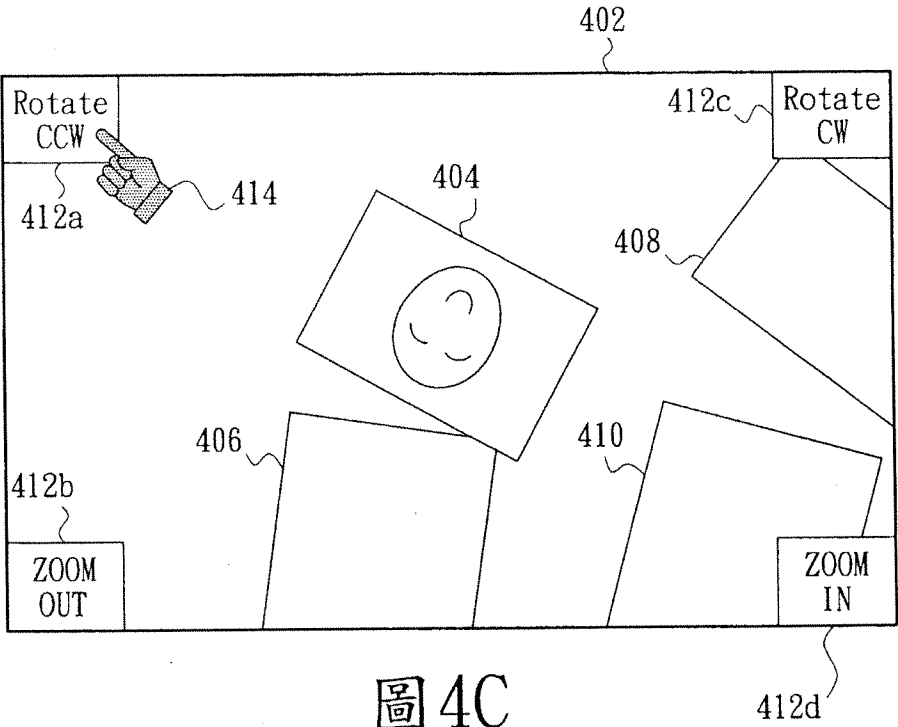


圖 4C

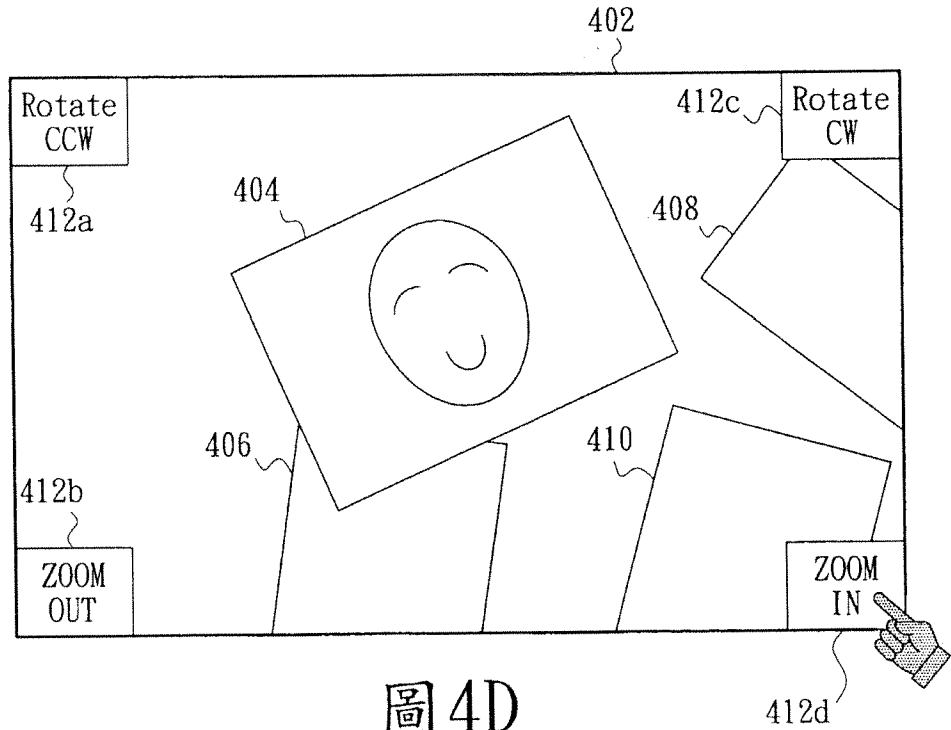


圖 4D

floating menu is selected. Thus, the step of performing a first order corresponding to the selected menu field when one of the plurality of menu fields in the floating menu is selected. Besides, the electronic device performs a second order corresponding to the selected menu field when the touch time of the selected menu field reaches a predetermined time.

四、指定代表圖：

(一)本案指定代表圖為：第（ 1 ）圖。

(二)本代表圖之元件符號簡單說明：

S102～S128：各個步驟流程

五、本案若有化學式時，請揭示最能顯示發明特徵的化學式：

無

Electronic Patent Application Fee Transmittal				
Application Number:		14154993		
Filing Date:		14-Jan-2014		
Title of Invention:		INFORMATION PROCESSING APPARATUS		
First Named Inventor/Applicant Name:		Masaaki YAMADA		
Filer:		Tomoki Tanida/BARBIE BEAVERS		
Attorney Docket Number:		093265-0037		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
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(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

Electronic Acknowledgement Receipt

EFS ID:	20819428
Application Number:	14154993
International Application Number:	
Confirmation Number:	3897
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	Masaaki YAMADA
Customer Number:	20277
Filer:	Tomoki Tanida/BARBIE BEAVERS
Filer Authorized By:	Tomoki Tanida
Attorney Docket Number:	093265-0037
Receipt Date:	28-NOV-2014
Filing Date:	14-JAN-2014
Time Stamp:	15:58:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
RAM confirmation Number	507
Deposit Account	500417
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	612195 a4098601de76a772dd06353901a4fb449f6c36b6	no	4

Warnings:**Information:**

2	Non Patent Literature	cnoa.pdf	1223778 c43d3baef5cd72bffa43cc1779d641f3e7d230e65	no	7
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Warnings:**Information:**

3	Foreign Reference	tw201101130a.pdf	3636985 7f5c1e7791bfb74617dc5d82473c2009d3d70a80	no	26
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Warnings:**Information:**

4	Fee Worksheet (SB06)	fee-info.pdf	30468 c8958a6383097732db9822b7d6a49f7cb4dc3b8d	no	2
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Warnings:**Information:**

Total Files Size (in bytes):	5503426
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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

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.

Docket No.: 062758-0345
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	:	Customer Number: 20277
Masaaki YAMADA	:	
	:	
Application No.: 14/154,993	:	Confirmation No.: 3897
	:	
Filed: January 14, 2014	:	Art Unit: 2624
	:	
For: INFORMATION PROCESSING APPARATUS	:	Examiner: Faragalla, Michael A.

AMENDMENT UNDER 37 C.F.R. 1.111

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

Madam:

Please enter the following amendments and remarks submitted in response to the Office

Action dated May 9, 2014.

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph after the Title and before the “BACKGROUND OF THE INVENTION”

This application is the Continuation of US Application No. 13/366,983, filed on February 6, 2012, now U.S. Pat. No. 8,654,093, which claims the benefit of Japanese patent application serial no. JP2011-025576, filed on February 9, 2011, the disclosures of which Applications are incorporated by reference herein.

AMENDMENTS TO THE CLAIMS

Claims 1-7 (Canceled)

8. (New) An information processing apparatus comprising:

a touch panel configured to detect a contact of a finger of a user;

a detector configured to detect first information necessary for an identification of the user when the contact is detected between the touch panel and the finger of the user;

a first controller configured to control the information processing apparatus to operate into two operating modes: at least an identification mode and a registering mode, as the operating mode thereof;

memory that is configured to store second information relating to the identification of the user, which is stored in advance; and

a second controller configured to execute a specified process when said first information and said second information are coincident within said registering mode, wherein:

in said registering mode, there are provided a first registering mode for inputting input information by a pad of the finger, and a second registering mode for inputting input information by an end of the finger, and said second information relating to the identification of the user is produced upon basis of the input information, which is inputted at least in the first or second mode.

9. (New) The information processing apparatus according to Claim 8 wherein said first information includes a position and an area of the finger contacting with said touch panel.

10. (New) The information processing apparatus according to Claim 8, wherein said first information includes a plurality of combinations of a position and an area of the finger contacting with said touch panel.

11. (New) The information processing apparatus according to Claim 8, wherein said specific process includes releasing of a lock of resting an operation of said information processing apparatus.

REMARKS

Applicants have carefully considered the May 9, 2014 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claim 1 was pending in this application at the time of the mailing of the Office Action.

In response to the Office Action dated May 9, 2014, claim 1 has been canceled and new claims 8-11 have been added. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification. Applicants submit that the present Amendment does not generate any new matter issue. Entry of the present Amendment is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Entry of various comments regarding the claims and/or the art, in the Office Action, should not be construed as any acquiescence or agreement by Applicants with the stated reasoning, regardless of whether or not these remarks specifically address any particular comment from the Office Action.

Claim 1 was rejected under statutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 8,654,093. Applicants have cancelled claim 1 thereby rendering the double patenting rejection moot.

Favorable consideration of newly added claims 8-11 is respectfully requested. The present subject matter, which is defined in new claim 8 differs from the Claim 1 of the parent patent (U.S.

Patent No. 8,654,093), in particular, in an aspect of conducting the registration and the identification with applying only the information of the finger.

Further, the claimed subject matter differs from the reference of record, Sakurai et al. (US Patent Pub. No. 2005/0162407), in particular, at least in an aspect that the subject matter comprises the followings: i.e., the memory and the first and the second controllers.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

/Brian K. Seidleck/

Brian K. Seidleck
Registration No. 51,321

500 North Capitol Street, N.W.
Washington, DC 20001
Phone: 202.756.8000 BKS:apr
Facsimile: 202.756.8087
Date: August 8, 2014

**Please recognize our Customer No. 20277
as our correspondence address.**

Electronic Acknowledgement Receipt

EFS ID:	19812062
Application Number:	14154993
International Application Number:	
Confirmation Number:	3897
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	Masaaki YAMADA
Customer Number:	20277
Filer:	Brian K. Seidleck/Anne Richardson
Filer Authorized By:	Brian K. Seidleck
Attorney Docket Number:	062758-0345
Receipt Date:	08-AUG-2014
Filing Date:	14-JAN-2014
Time Stamp:	12:00:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		62758-345_Amendment.pdf	172641 c4392561cc19eade2d4cbb4c70d54646e23a3898	yes	6

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Specification	2	2
	Claims	3	4
	Applicant Arguments/Remarks Made in an Amendment	5	6

Warnings:

Information:

Total Files Size (in bytes):	172641
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New International Application Filed with the USPTO as a Receiving Office

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/154,993		Filing Date 01/14/2014		☐ 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 \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*			X \$ =			
☐ 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	08/08/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 4	Minus	** 20	= 0	X \$80 =		0	
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0	X \$420 =		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 \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ 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. ** 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". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

LIE
/DIANE WILLIAMS/

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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/154,993	01/14/2014	Masaaki YAMADA	062758-0345	3897

20277 7590 05/09/2014
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

EXAMINER

FARAGALLA, MICHAEL A

ART UNIT	PAPER NUMBER
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2624

NOTIFICATION DATE	DELIVERY MODE
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05/09/2014

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):

mweipdocket@mwe.com

Office Action Summary	Application No. 14/154,993	Applicant(s) YAMADA, MASAOKI	
	Examiner MICHAEL FARAGALLA	Art Unit 2624	AIA (First Inventor to File) 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 01/14/2014.
☐ 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 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 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 01/14/2014 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

Double Patenting

1. A rejection based on double patenting of the “same invention” type finds its support in the language of 35 U.S.C. 101 which states that “whoever invents or discovers any new and useful process... may obtain a patent therefor...” (Emphasis added). Thus, the term “same invention,” in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the claims that are directed to the same invention so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 1 is rejected upon statutory double patenting grounds for being a duplicate claim of claim 1 of patent number US: 8,654,093.

Allowable Subject Matter

2. Claim 1 would be allowed if the double patenting rejection is overcome.

The following is an examiner's statement of reasons for allowance: The best prior art of record, i.e. SAKURAI et al (Publication number: 2005/0162407) do not specifically show the limitations of "a storage unit which stores reference identification information and a reference area range; a determination unit which determines whether the identification information detected by the detection unit matches the reference identification information stored in the storage unit and whether the area of the contact detected by the detection unit falls within the reference area range stored in the storage unit; and a control unit which performs particular processing on condition the determination unit determines that the identification information detected by the detection unit matches the reference identification information stored".

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."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL FARAGALLA whose telephone number is (571)270-1107. The examiner can normally be reached on Mon-Fri 7:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kent Chang can be reached on 571-272-7667. 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.

/MICHAEL FARAGALLA/
Primary Examiner, Art Unit 2624

03/09/2014

Notice of References Cited	Application/Control No. 14/154,993		Applicant(s)/Patent Under Reexamination YAMADA, MASAOKI	
	Examiner MICHAEL FARAGALLA		Art Unit 2624	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2005/0162407	07-2005	Sakurai et al.	345/173
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	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.

<i>Index of Claims</i> 	Application/Control No. 14154993	Applicant(s)/Patent Under Reexamination YAMADA, MASA AKI
	Examiner MICHAEL FARAGALLA	Art Unit 2624

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

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	03/09/2014							
	1	✓							

Receipt date: 01/14/2014

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14154993 - GAI-2624

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	N/A		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	062758-0345		

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	5844547		1998-12-01	Minakuchi et al.	Corresponds to JP 5-100809-A

If you wish to add additional U.S. Patent citation information please click the Add button.

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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	20050162407		2005-07-28	Sakurai et al.	Corresponds to JP 2005-202527-A

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2005-202527	JP	A	2005-07-28	Fujitsu Component Ltd		☐
	2	5-100809	JP	A	1993-04-23	FUJITSU LTD		☐

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Receipt date: 01/14/2014 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14154993 - GAU: 2624	
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	N/A		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	062758-0345		

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
M. F.	1	Entire Prosecution of US Application No. 13/366,983 to YAMADA entitled "INFORMATION PROCESSING APPARATUS" Filed 02/06/2012	☐

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

EXAMINER SIGNATURE

Examiner Signature	/Michael Faragalla/	Date Considered	03/09/2014
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*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.

Receipt date: 01/14/2014 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14154993 - GAU: 2624
	Filing Date		2014-01-14
	First Named Inventor	Masaaki YAMADA	
	Art Unit	N/A	
	Examiner Name	Not Yet Assigned	
	Attorney Docket Number	062758-0345	

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	/Brian K. Seidleck/	Date (YYYY-MM-DD)	2014-01-14
Name/Print	Brian K. Seidleck	Registration Number	51321

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.

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

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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.
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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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BIB DATA SHEET

CONFIRMATION NO. 3897

SERIAL NUMBER 14/154,993	FILING or 371(c) DATE 01/14/2014 RULE	CLASS 345	GROUP ART UNIT 2624	ATTORNEY DOCKET NO. 062758-0345	
APPLICANTS Hitachi Consumer Electronics Co., Ltd., Tokyo, JAPAN, Assignee (with 37 CFR 1.172 Interest); INVENTORS Masaaki YAMADA, Yokohama, JAPAN; ** CONTINUING DATA ***** This application is a CON of 13/366,983 02/06/2012 PAT 8654093 ** FOREIGN APPLICATIONS ***** JAPAN 2011-025576 02/09/2011 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/28/2014					
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and /MICHAEL A FARAGALLA/ Acknowledged Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY JAPAN	SHEETS DRAWINGS 17	TOTAL CLAIMS 1	INDEPENDENT CLAIMS 1
ADDRESS MCDERMOTT WILL & EMERY LLP The McDermott Building 500 North Capitol Street, N.W. WASHINGTON, DC 20001 UNITED STATES					
TITLE INFORMATION PROCESSING APPARATUS					
FILING FEE RECEIVED 1740	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

Search Notes 	Application/Control No. 14154993	Applicant(s)/Patent Under Reexamination YAMADA, MASAOKI
	Examiner MICHAEL FARAGALLA	Art Unit 2624

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	173, 175, 178, 650, 690	10/07/2013	M.F.

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search	10/07/2013	M.F.

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/154,993	01/14/2014	Masaaki YAMADA	062758-0345

CONFIRMATION NO. 3897

PUBLICATION NOTICE



OC00000068315656

20277
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

Title:INFORMATION PROCESSING APPARATUS

Publication No.US-2014-0125621-A1

Publication Date:05/08/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Docket No.: 062758-0345
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	:	Customer Number: 20277
Masaaki YAMADA	:	
	:	
Application No.: 14/154,993	:	Confirmation No.: 3897
	:	
Filed: January 14, 2014	:	Art Unit: 2624
	:	
For: INFORMATION PROCESSING APPARATUS	:	Examiner: M. A. Faragalla

TRANSMITTAL LETTER

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

Madam:

Enclosed are the following items for filing in connection with the above-referenced Patent

Application:

1. Properly executed Declaration

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0417, under Order No. 062758-0345.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP

/Brian K. Seidleck/

Brian K. Seidleck
Registration No. 51,321

500 North Capitol Street, N.W
Washington, DC 20001
Phone: (202) 756-8339 BKS:mjb
Facsimile: (202) 756-8087
Date: April 24, 2014

**Please recognize our Customer No. 20277 as
our correspondence address.**

Electronic Acknowledgement Receipt

EFS ID:	18848348
Application Number:	14154993
International Application Number:	
Confirmation Number:	3897
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	Masaaki YAMADA
Customer Number:	20277
Filer:	Brian K. Seidleck/Margaret Barham
Filer Authorized By:	Brian K. Seidleck
Attorney Docket Number:	062758-0345
Receipt Date:	24-APR-2014
Filing Date:	14-JAN-2014
Time Stamp:	13:09:40
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	Oath or Declaration filed	DEC_062758-0345.pdf	185327 94734a1734e736cddb75875429273f3b4cfb1303	no	1

Warnings:

Information:

2	Transmittal Letter	TRN_062758-0345.pdf	17242	no	2
			2090d53eccf25471cf609565d6376947ed57fb3		
Warnings:					
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発明の名称 Title of Invention	INFORMATION PROCESSING APPARATUS
下記発明者である私は、つぎのことがらを宣言します。 As the below named inventor, I hereby declare that: 本宣言は This declaration is directed to: ☐ 添付されている、あるいは The attached application, or ☐ _____ に、米国出願あるいは PCT 国際出願番号 _____ として出願されているものに 宛てられています。 ☒ United States application or PCT international application number <u>14/154993</u> filed on <u>January 14, 2014</u> 上記の出願は私自身、あるいは私が権限を譲与したものによって行われたものです。 The above-identified application was made or authorized to be made by me. 私は本出願書中にあらわれるもとの発明者、あるいはもとの共同発明者です。 I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. 私は本宣言書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認めます。 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. 私は、特許請求の範囲を含む上記の明細書を確認し内容を理解しています。 I have reviewed and understand the contents of the above-identified application, including the claims. 私は、連邦規則法典第 37 編規則 1.56 に定義されている、特許性について重要な情報を開示する義務があることを認めます。 I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.	
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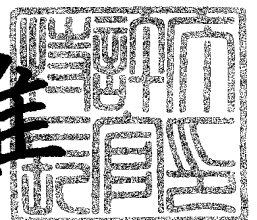
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【書類名】明細書

【発明の名称】情報処理装置

【技術分野】

【0001】

本発明は、情報処理装置に関するものである。

【背景技術】

【0002】

本技術分野に関する文献として、特開平5-100809号公報が公開されている。この公報には、「タッチパネル装置を備えた情報処理装置において、少なくとも、オブジェクトの物理的種別と、ディスプレイ上の表示位置情報と、該オブジェクトの状態が設定されているファイル情報と、該オブジェクトの表示データが格納されている通常表示ファイルの名称と、特殊状態（反転表示）にあるファイルの名称とからなる表示情報テーブル1と、タッチ位置座標と、タッチ圧力情報とからなるタッチパネル情報2とを設け、上記表示情報テーブル1が示す物理的情報と、上記タッチパネル情報2が示す物理的情報との対応関係で決まる物理操作を、該オブジェクトに与えて表示するように構成する。」との記載が有る。

【先行技術文献】

【特許文献】

【0003】

【特許文献1】特開平5-100809

【発明の概要】

【発明が解決しようとする課題】

【0004】

近時、特に、多機能化する携帯用途の情報処理装置において、使い勝手の向上が要請されている。

【0005】

本発明の目的は、ユーザーにとって、利便性の高い情報処理装置を提供することである。

【課題を解決するための手段】

【0006】

前記課題を解決するために、例えば、本発明に係る情報処理装置は、文字、図形、記号その他の識別情報を複数表示し、且つユーザーの指その他の対象物との接触を検出するタッチパネルと、前記タッチパネルにより対象物との接触が検出されたとき、前記タッチパネルにより表示される複数の識別情報のうち当該接触の位置が示す識別情報を特定し且つ当該接触の面積を検出する検出手段と、所定の識別情報及び所定の面積の範囲を記憶する記憶手段と、前記検出手段により検出された識別情報が前記記憶手段により記憶される所定の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される所定の面積の範囲にあるか否かの判別を行う判別手段と、前記判別手段による判別の結果、前記検出手段により検出された識別情報が前記記憶手段により記憶される所定の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される所定の面積の範囲にあることを条件に、特定の処理を実施する制御手段と、を備えたことを特徴とする。

【発明の効果】

【0007】

本発明によれば、ユーザーにとって、より利便性の高い情報処理装置を提供することができる。

【図面の簡単な説明】

【0008】

【図1（a）】ユーザーが指先をタッチパネル1に接触させることにより、入力を行うときのイメージを示した図である。

【図1（b）】ユーザーが指腹をタッチパネル1に接触させることにより、入力を行うときのイメージを示した図である。

【図2】タッチパネル1を搭載する携帯端末0の内部構成例を示す図である。

【図3】携帯端末0のロックを解除する時のフローを示す図である。

【図4（a）】指先でのドラッグにより携帯端末0のロックを解除する時の表示画面例を示す図である。

【図4（b）】指腹でのドラッグにより携帯端末0のロックを解除する時の表示画面例を示す図である。

【図5】ロック解除時の時間軸におけるセンサ4を示す模式図である。

【図6】指先でのフリックと指腹でのタップとを判別する方法を示す図である。

【図7（a）】アイコンが移動する様子を示した図であり、アイコンの移動前を示す図である。

【図7（b）】アイコンが移動する様子を示した図であり、アイコンが移動中であることを示す図である。

【図7（c）】アイコンが移動する様子を示した図であり、アイコンの移動後を示す図である。

【図8】アイコンが移動するときにおけるセンサ4を示した模式図である。

【図9】パスワード登録時のフローを示す図である。

【図10（a）】校正時の表示画面例を示す図であり、ユーザーに指先での接触を促す画面例を示す図である。

【図10（b）】校正時の表示画面例を示す図であり、ユーザーに指腹での接触を促す画面例を示す図である。

【図11（a）】パスワード登録を促す画面を示す図である。

【図11（b）】パスワード登録中において、指腹入力になされたことをユーザーに知らせる図である。

【図11（c）】パスワード登録中において、指先入力になされたことをユーザーに知らせる図である。

【図12（a）】パスワードと入力方法から構成されるデータを示す図である。

【図12（b）】1つのパスワードと複数の入力方法から構成されるデータを示す図である。

【図13】パスワード解除時のフローを示す図である。

【図14】パスワード解除をユーザーに促す画面を示す図である。

【発明を実施するための形態】

【実施例1】

【0009】

以下、本発明の実施の形態について図を用いて説明する。

【0010】

図1は、本実施例に係る携帯端末0において、ユーザーが所望とする入力をおこなうときの方法を示した図である。同図において、携帯端末0はタッチセンサ機能を有するタッチパネル1を有している。図1（a）は、ユーザーが指先をタッチパネル1に接触させることにより、入力を行うときのイメージであり、ユーザーの指とタッチパネル1とによる接触の面積（以下、「接触範囲」という）が狭いことが特徴である。以下、ユーザーによるこの行為を指先入力と呼び説明する。図1（b）は、ユーザーが指の腹をタッチパネル1に接触させることにより、入力を行うときのイメージであり、指先入力の場合と比較して、ユーザーの指とタッチパネル1との接触範囲が広いことが特徴である。以下、この行為を指腹入力と呼び説明する。

【0011】

図2は、携帯端末0の内部的な構成例を示す。符号1は、指が接触すると静電容量が変化し、当該変化に応じた信号を出力可能なセンサ4と、数字や文字等を表示可能な液晶パネルと、前記センサ等を保護するガラスパネルと、から成るタッチパネルである。符号2

は、タッチセンサにより出力された信号に基づいて接触が生じた位置及び接触範囲を検出する接触範囲検出部である。符号3は、各構成を制御するための制御部であり、演算部と、カウンタと、各種データを記憶する記憶手段とを有する。符号4は、接触により容量が変化するセンサおよびセンサ群であり、斜線部は、指が接触したことにより反応しているセンサ4、斜線部以外は、指が接触せず反応していないセンサ4を模式的に表している。符号5は、ユーザーが押すことのできるボタンスイッチであり、スタンバイ解除や戻る、進むといった各種機能が割り当てられる。

【0012】

次に、本実施例における校正および携帯端末0のロック解除時の使用方法について、図3にフローチャート、図4にロック解除表示画面、図5にロック解除時の時間軸におけるセンサ4の模式図を示し、説明する。

【0013】

尚、ユーザーが携帯端末0を操作する方法としては、タップ、ドラッグ、フリック、ピンチその他の動作がある。タップとは、ユーザーが、タッチパネル1上の画面一点に指を一瞬触れる行為を言う。ドラッグとは、ユーザーが、タッチパネル1上の画面に指を触れたまま、触れている指を移動する行為を言う。フリックとは、ユーザーが、タッチパネルの画面表面を指ですばやくなぞる行為を言う。ピンチとは、ユーザーが、二本の指をタッチパネル1上の画面二点に触れさせたまま、二点間の距離を変化させる行為を言う。

【0014】

まず、携帯端末0の電源がオンから、校正を実施し、その後、電源がオフとなるまでの一連の動作について説明する。尚、本実施例における校正とは、接触範囲の判別に用いる閾値を設定する動作を示す。

【0015】

ボタンスイッチ5が長押しされると、携帯端末0の電源がオンとなる。制御部3はプログラムの起動、センサの調整、閾値の初期化、画面表示等の初期設定をする（S1000）。初期設定終了後、制御部3は、タッチパネル1上にロック解除画面が表示されるように制御する（S1001）。ロック解除画面は、図4（a）に示すように、ロック解除用のアイコンが指先でy方向又は-y方向にドラッグ可能なように表示された画面である。制御部3は、ユーザーによりロック解除用のアイコンが指先でドラッグされるのを待つ（S1002）。

【0016】

図5（a）は、ユーザーが指先でy方向にドラッグし、ロック解除した場合の時間軸におけるセンサ4の模式図である。同図において、斜線部分は、ユーザーの指との接触により反応しているセンサ4を示し、横線部分が過去に反応したセンサ4を示し、空白部分は、ユーザーの指との接触がなく、反応していないセンサ4である。時間t0で接触が開始し、時間t1でドラッグ、時間t2でドラッグ終了し、ロックが解除される。制御部3は、指が接触し反応したセンサ4の列数の平均値‘2’に補正值‘1’を足した値‘3’を閾値として記憶する。

【0017】

また、別の方法として、図4（b）はロック解除の別の方法として、指腹入力を用いる例を示す図であり、ロック解除用のアイコンがy方向又は-y方向にドラッグ可能なように表示された画面である。図5（b）は、ユーザーがロック解除用のアイコンを指腹でy方向にドラッグし、ロック解除した場合の時間軸におけるセンサ4の模式図である。時間t0でタッチを開始し、時間t1でドラッグ、時間t2でドラッグ終了し、ロックが解除される。制御部3は、指が接触し反応したセンサ4の列数の平均値‘4’に補正值‘1’を引いた値‘3’を閾値として記憶する。

【0018】

このように、ロック解除時に指が接触し反応したセンサ4の列数の平均値を用いて接触範囲の判別に用いる閾値とする（S1003）。すなわち、ロック解除動作をしつつ、接触範囲の判別のための閾値を得ること（即ち、校正）ができる。

【0019】

制御部3は、携帯端末0のロックを解除し（S1004）、ユーザーによるタッチパネル1を介した種々の入力を待つ（S1005）。閾値より接触範囲が狭いか同等（即ち、「3」以下）の入力があった場合（S1006）、制御部3は指先入力となされたと判断する（S1007）。一方、閾値より接触範囲が広い（即ち、「4」以上）入力があった場合（S1006）、制御部3は指腹入力となされたと判断する（S1008）。そして、当該入力に応じた種々の動作を実施する。

【0020】

一定時間経過後、例えば無入力状態が数分経過後、制御部3は校正日時、閾値等の各種設定値を記憶し、携帯端末0をロックする（S1009）。ボタンスイッチ5に割り当てられたロック解除スイッチが押下されると（S1010）、制御部3はロック解除画面を表示する（S1001）。尚、電源がオンの状態でボタンスイッチ5が長押しされると、携帯端末0の電源はオフとなる。

【0021】

以上のように、個人によって指先入力の接触範囲が異なっても、校正を実施することにより、接触範囲の判別精度を向上することができる。尚、閾値を、反応したセンサ4の列数の平均値としたが、これに限らない。例えば、反応したセンサ4の列数の平均値に任意の値を増減し補正、設定してもよいし、整数とは限らず、静電容量値を用いてもよい。また、ロック時に接触範囲の判別に用いる閾値を破棄し、ロック解除時ごとに、校正し閾値を更新してもよい。また、ロック解除時に校正をするようにしたがこれに限らず、例えば、携帯端末0の電源がオンされたときの最初の1回のみでもよく、設定メニュー等の項目から校正を行う形態でもよい。また、指先入力または指腹入力での接触範囲にて校正するとしたが、これに限らず、指先入力及び指腹入力での接触範囲を取得し、閾値を複数もつ構成としてもよい。

【0022】

指先入力と指腹入力の判別方法について、より詳細に説明する。図6は指先入力でのフリックと指腹入力でのタップとの判別方法を示す。図6（a）はユーザーがx方向にフリックした場合のセンサ4の反応状況を示し、図6（b）は指腹入力でのタップした場合のセンサ4の反応状況を示している。指先入力でのフリック時及び指腹入力でのタップ時において、接触を開始した時間t00において、反応しているセンサ個数が同じである。制御部3は、接触が開始された時刻t00を記憶する。制御部3は時刻t01、時刻t02と、接触範囲の反応しているセンサ個数に変動がない場合、指先入力でのフリックと判断する。時刻t01、時刻t02と、時間と共に反応しているセンサ4が増加する場合、制御部3は指腹入力と判断する。すなわち、制御部3は時間t00で反応したセンサ個数と時間t02で反応しているセンサ個数を比較することで、指先入力でのフリックと指腹入力でのタップを判別する。以上のように、ユーザーがタッチパネル1に触れた瞬間に判別を行い、設置範囲が狭く指先入力と判断されることを回避することが可能である。

【0023】

次に、指先入力と指腹入力による接触範囲の違いを用いたアイコン移動について具体的に説明する。図7（a）～（c）は、ユーザーが、指先入力及び指腹入力を用いてアイコン7を右側（y方向）へ移動させる様子を示した図である。図8はアイコン移動における反応したセンサ4と指の移動を模式的に示した図である。符号80及び符号82は接触範囲が広い指腹入力時の指を表しており、符号81は接触範囲が狭い指先入力時の指を示している。移動させたい該当のアイコン7を指腹入力80で触れる。制御部3は接触範囲が閾値以上となると、指腹入力80と判断し、アイコン7を移動対象とする（図7（a））。ユーザーは画面をタッチしたまま、指腹入力80から指先入力81へ移行し、制御部3は接触範囲が閾値以下となると、移動対象となっているアイコン7を移動可能な状態にし、ユーザーがアイコン7をドラッグする（図7（b））。ユーザーはアイコン7を所望の箇所で指先入力81から指腹入力82へ移行し、制御部3は接触範囲が閾値以上となると、指腹入力82と判断しアイコン7の配置を確定させる（図7（c））。

【0024】

以上のように、本実施例にかかる携帯端末0によれば、ユーザーは、より直感的な入力を行うことができる。尚、ここで示す接触範囲は反応しているセンサの個数でもよく、反応しているセンサ4の列数の最大値でもよい。尚、接触面積の広い指腹入力がアプリケーションで設定されていない又は使用しないとき、接触面積の判断を省略し、一律の接触動作としてもよい。

【実施例2】

【0025】

本実施例は、パスワードを用いる携帯端末0の例である。本実施例では数字からなるパスワードに加えて、接触範囲の違いも記憶し、セキュリティを向上させる特徴を持つ。4桁の数字を用いるパスワードと接触範囲の違いを用いるセキュリティ向上の機能を一例とし、図9にパスワード登録時のフローチャート、図10に校正時の表示画面例、図11にユーザーにパスワードの登録を促す画面、図12にパスワードと入力方法からなるデータを示し説明する。尚、実施例2に係る携帯端末0は、特に明示しない限り、実施例1に係る携帯端末0と同様の構成を有する。

【0026】

はじめにパスワードを登録する処理について、図9に示すフローチャートを用いて説明する。まず、カウンタのリセット等の初期設定後、図10(a)に示すような画面を表示し、ユーザーに指先での接触を促す(S2000)。制御部3は指先入力の接触範囲を得る(S2001)。次に図10(b)に示すような画面を表示し、ユーザーに指腹での接触を促す。制御部3は指腹入力の接触範囲を得る(S2002)。接触範囲を得る際に、指先または指腹で接触後、ボタンスイッチ5が押下されたタイミングで接触範囲を検出する。次に、制御部3は指先入力での接触範囲より指腹入力での接触範囲が大きい場合に限り、正常な入力とし(S2003: Yes)、指先入力の接触範囲を閾値と決定し、記憶する(S2004)。もし、指腹入力による接触範囲が指先入力による接触範囲以下となる場合には(S2003: No)、もう一度、指先入力を促す(S2001)。制御部3はカウンタが4以下ならば(S2005: No)、指先入力または指腹入力での暗証番号を入力可能である旨を表示し、任意の数字の登録を許可する(図11(a))。

【0027】

タッチパネル1上に表示された0～9の数字のうち、ユーザーにより指先入力または指腹入力のどちらかで任意の数字が選択されて触れられると、当該数字を入力数字として登録する(S2006)。制御部3は接触範囲と閾値を比較し、接触範囲が閾値以下ならば(S2007: Yes)、入力数字と指先入力とを関連付けて記憶し(S2008)、図11(c)が示すように、指先で登録された旨を表示する。接触範囲が閾値より大きいならば(S2007: No)、入力数字と指腹入力を関連付けて記憶する(S2009)。そして、図11(b)が示すように、指腹で登録された旨を表示する。制御部3はカウンタをインクリメントし、次のパスワード入力へ移行する(S2010)。制御部3はカウンタが4となると(S2005: No)、図12(a)に示すように、4個の入力数字からなる数字列をパスワードとして登録すると共に、入力数字毎に、指先入力及び指腹入力の何れかを入力方法として記憶し、パスワード登録を完了する(S2010)。

【0028】

次にパスワード解除方法について、図13にパスワード入力時のフローチャート、図14にパスワード解除画面を示し説明する。

【0029】

制御部3は、図14に示すように、複数の数字を表示するテンキーを含むパスワード解除画面を表示し、ユーザーに数字の入力を促すと共に、カウンタのリセット等の初期設定をする(S3000)。そして、制御部3は、ユーザーにより数字が入力されるのを待つ(S3001)。ユーザーの指がタッチパネル1に触れると、制御部3は、その接触の位置に応じた数字を特定すると共に、当該接触による接触範囲と閾値を比較し、指先入力が行われたのか指腹入力が行われたのかを判定する(S3002)。制御部3は入力された

数字と入力方法を記憶する（S3003）。入力された数字が登録したパスワードと一致し（S3004：Yes）、入力方法も一致する場合（S3005：Yes）、カウンタをインクリメントし（S3006）、カウンタが4でない場合（S3007：No）、次のパスワード入力へと移行する。カウンタが4である場合（S3007：Yes）、パスワードが認証され、パスワードを解除し（S3008）、パスワード解除完了となる。一方、入力された数字がパスワードと一致しない（S3004：No）、パスワードが一致しても入力方法が異なる場合（S3005：No）、パスワード又は入力方法が異なる旨を表示し（S3009）、パスワード解除を中止する。

【0030】

尚、1つのパスワードと複数の入力方法を登録してもよい。例えば、図12（b）のように1つのパスワードに3種の入力方法を登録し、入力方法1に通常待受画面、入力方法2にはメール作成画面、入力方法3にはアプリ起動と動作を割り当てる。これにより、ユーザーにとっては、パスワードを解除しつつ、所望の動作への移行が容易になり、利便性が向上する。尚、1つのパスワードとしたが、これに限らず、複数のパスワードに複数の入力方法を登録してもよい。

【0031】

以上の構成により、簡単な入力でロックの解除を複雑なものとし、セキュリティ向上を図ることができる。これにより、携帯端末0は、ユーザーにとって機密性の高い情報を扱うことができ、利便性が向上する。

【0032】

また、登録されているパスワードに加え、当該パスワードを構成する数字毎の入力方法を記憶するのみでセキュリティの向上を図ることができ、記憶容量の増大を極力防ぐことができる。

【0033】

更に、ユーザーにしてみれば、パスワードを構成する数字毎に入力方法を覚えるのみで携帯端末0のロックを解除することができるので、ユーザーの負担の増加を極力防ぐことができる。また、ユーザーが、携帯端末0のロックの解除方法を他人に伝える必要に迫られた場合には、パスワードに加えて、パスワードを構成する数字毎の入力方法を伝えるのみで済むという利点もある。

【0034】

尚、本実施例のパスワードは、数字のみから構成されるものとしたが、本発明はこれに限られず、英字、記号、図形、模様、色彩その他の要素又はこれらの組合せから構成されるようにしても良い。また、4桁に限られるものでもなく、1桁であっても、2桁以上であっても良い。

【0035】

また、パスワードを登録する処理（図9）は、設定のメニューからユーザーが呼び出すことにより開始させるなど、所定の条件が成立したときに開始するようにすれば良い。

【0036】

尚、校正は一点をタッチする校正としたが、これに限らない。例えば、前記実施例1におけるロック解除時の校正を用いてもよい。また、設定のメニューからユーザーが呼び出すことにより、校正を開始しても良い。尚、パスワード解除時、接触範囲の違いによる判別も行う旨を非表示とし、数字のみであった場合、接触範囲の違いによる判別も登録されている旨を表示するようにしてもよい。また、パスワード入力時に数字、入力方法を伏せるようにしてもよい。尚、指先入力と指腹入力の判定を閾値での判定としたが、これに限らない。例えば、指先入力での接触範囲と指腹入力での接触範囲を記憶し、入力された際の接触範囲と比較し、より近い方を選択する構成でもよい。

【0037】

尚、ある入力時のみ、接触範囲の違いを判別する動作を行わないとしてもよい。例えば、ボタンスイッチが押されている場合や、タッチパネルの2点以上に接触し、入力を行うマルチタッチ入力する場合、接触範囲の違いによる判別を行わないとしてもよい。

【符号の説明】

【 0 0 3 8 】

- 0 携帯端末
- 1 タッチパネル
- 2 接触範囲検出部
- 3 制御部
- 4 センサ
- 5 ボタンスイッチ
- 7 アイコン
- 8 0 指腹入力
- 8 1 指先入力

【書類名】特許請求の範囲

【請求項 1】

複数の識別情報を表示し、対象物との接触を検出するタッチパネルと、

前記タッチパネルにより対象物との接触が検出されたとき、前記タッチパネルにより表示される複数の識別情報のうち当該接触の位置が示す識別情報を特定し且つ当該接触の面積を検出する検出手段と、

所定の識別情報及び所定の面積の範囲を記憶する記憶手段と、

前記検出手段により検出された識別情報が前記記憶手段により記憶される所定の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される所定の面積の範囲にあるか否かの判別を行う判別手段と、

前記判別手段による判別の結果、前記検出手段により検出された識別情報が前記記憶手段により記憶される所定の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される所定の面積の範囲にあることを条件に、特定の処理を実施する制御手段と、

を備えたことを特徴とする情報処理装置。

【請求項 2】

前記記憶手段は、所定の条件が成立した場合、前記検出手段により検出された識別情報及び接触の面積を前記所定の識別情報及び前記所定の面積の範囲として記憶することを特徴とする請求項 1 に記載の情報処理装置。

【請求項 3】

前記記憶手段は、所定の識別情報及び前記所定の面積の範囲として、第 1 の識別情報及び第 1 の面積の範囲並びに第 2 の識別情報及び第 2 の面積の範囲を記憶し、

前記判別手段は、前記検出手段により検出された識別情報が前記記憶手段により記憶される第 1 の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される第 1 の面積の範囲にあることを条件に、前記検出手段により検出された識別情報が前記記憶手段により記憶される第 2 の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される第 2 の面積の範囲にあるか否かの判別を行うことを特徴とする請求項 1 又は 2 に記載の情報処理装置。

【請求項 4】

前記記憶手段は閾値を記憶し、

前記記憶手段により記憶される所定の面積の範囲は前記閾値を基準に特定されることを特徴とする請求項 1 ～ 3 の何れかに記載の情報処理装置。

【請求項 5】

所定の条件が成立した場合に、

前記検出手段により検出された接触の面積を前記閾値として登録することを特徴とする請求項 4 に記載の情報処理装置。

【請求項 6】

複数の識別情報を表示し、対象物との接触を検出するタッチパネルと、

前記タッチパネルにより対象物との接触が検出されるとき、前記タッチパネルにより表示される複数の識別情報のうち当該接触の位置が示す識別情報を特定し且つ当該接触の面積を検出する検出手段と、

一連の識別情報及び当該一連の識別情報の夫々に対応する面積の範囲を記憶する記憶手段と、

前記検出手段により検出された識別情報の組が前記記憶手段により記憶される一連の識別情報と一致し且つ前記検出手段により検出された接触の面積の夫々が前記記憶手段により記憶される一連の面積の範囲の夫々にあることを条件に、特定の処理を実施する制御手段と、

を備えたことを特徴とする情報処理装置。

【請求項 7】

前記記憶手段は、一連の識別情報の夫々に対応する面積の範囲として、第 1 の面積の範

囲の組及び第 2 の面積の範囲の組を記憶し、

前記検出手段により検出された識別情報の組が前記記憶手段により記憶される一連の識別情報と一致し且つ前記検出手段により検出された接触の面積の夫々が前記記憶手段により記憶される第 1 の組の面積の範囲の夫々にあることを条件に、第 1 の処理を実施し、前記検出手段により検出された識別情報の組が前記記憶手段により記憶される一連の識別情報と一致し且つ前記検出手段により検出された接触の面積の夫々が前記記憶手段により記憶される第 2 の組の面積の範囲の夫々にあることを条件に、第 2 の処理を実施することを特徴とする請求項 6 に記載の情報処理装置。

【書類名】 要約書

【要約】

【課題】

タッチパネルを備えた情報処理装置において、利便性を向上させる。

【解決手段】

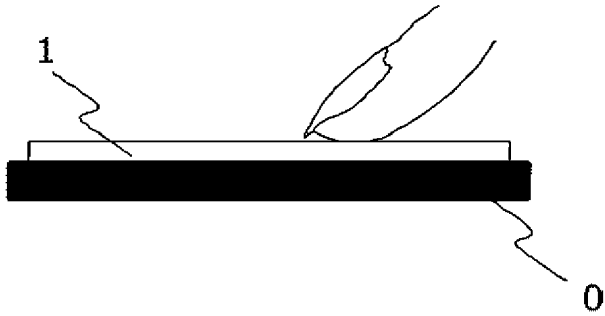
本発明にかかる情報処理装置は、文字、図形、記号その他の識別情報を複数表示し、且つユーザーの指その他の対象物との接触を検出するタッチパネルと、前記タッチパネルにより対象物との接触が検出されとき、前記タッチパネルにより表示される複数の識別情報のうち当該接触の位置が示す識別情報を特定し且つ当該接触の面積を検出する検出手段と、所定の識別情報及び所定の面積の範囲を記憶する記憶手段と、前記検出手段により検出された識別情報が前記記憶手段により記憶される所定の識別情報と一致し且つ前記検出手段により検出された接触の面積が前記記憶手段により記憶される所定の面積の範囲にあることを条件に、特定の処理を実施する制御手段と、を備える。

【選択図】 図2

【書類名】 図面

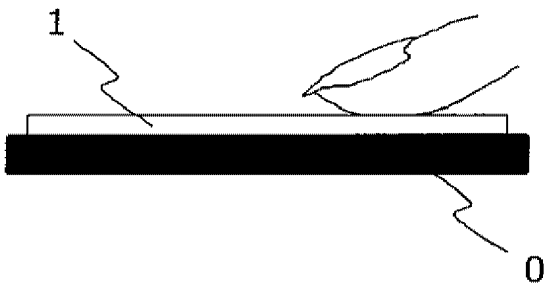
【図 1 (a)】

図 1 (a)



【図 1 (b)】

図 1 (b)



【図 2】

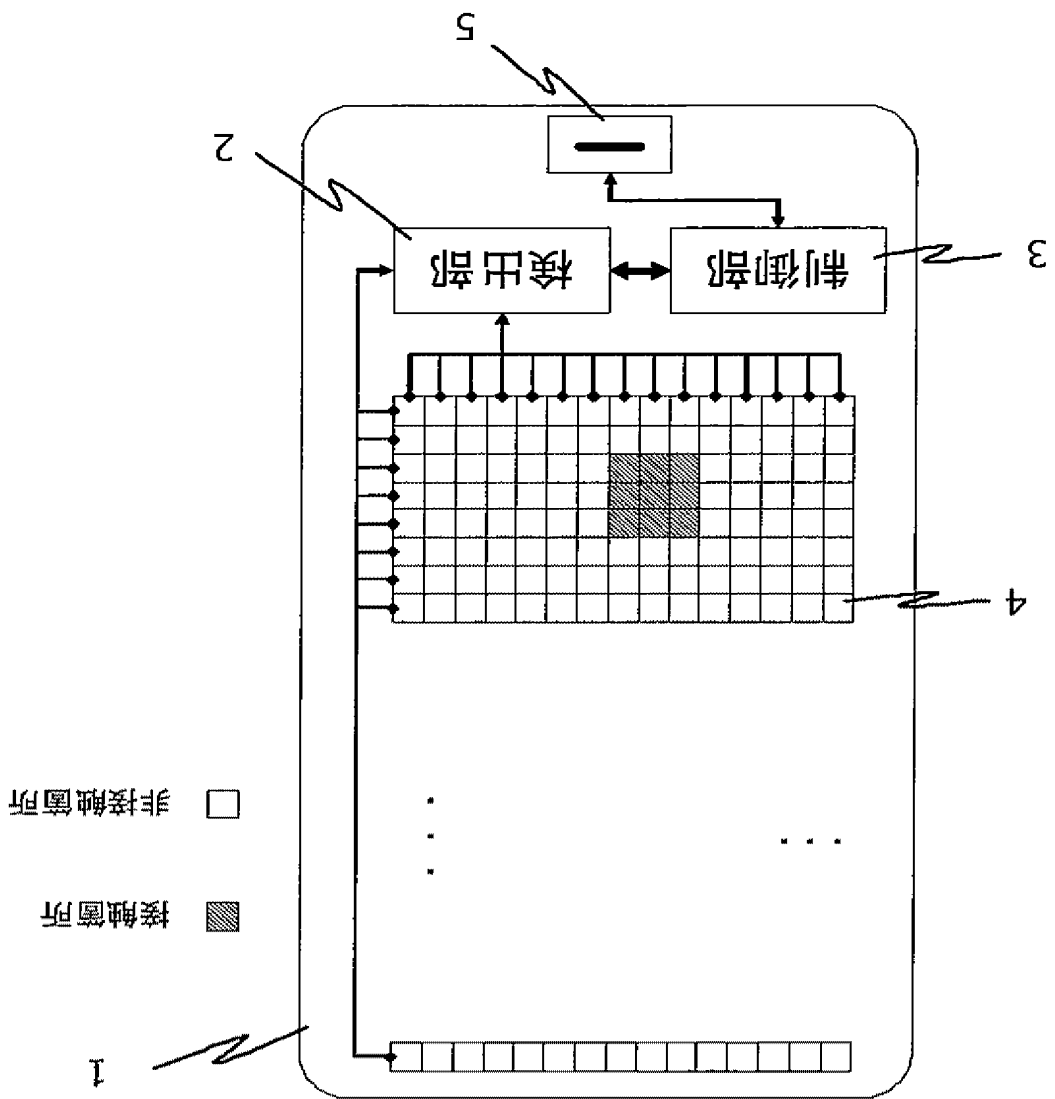
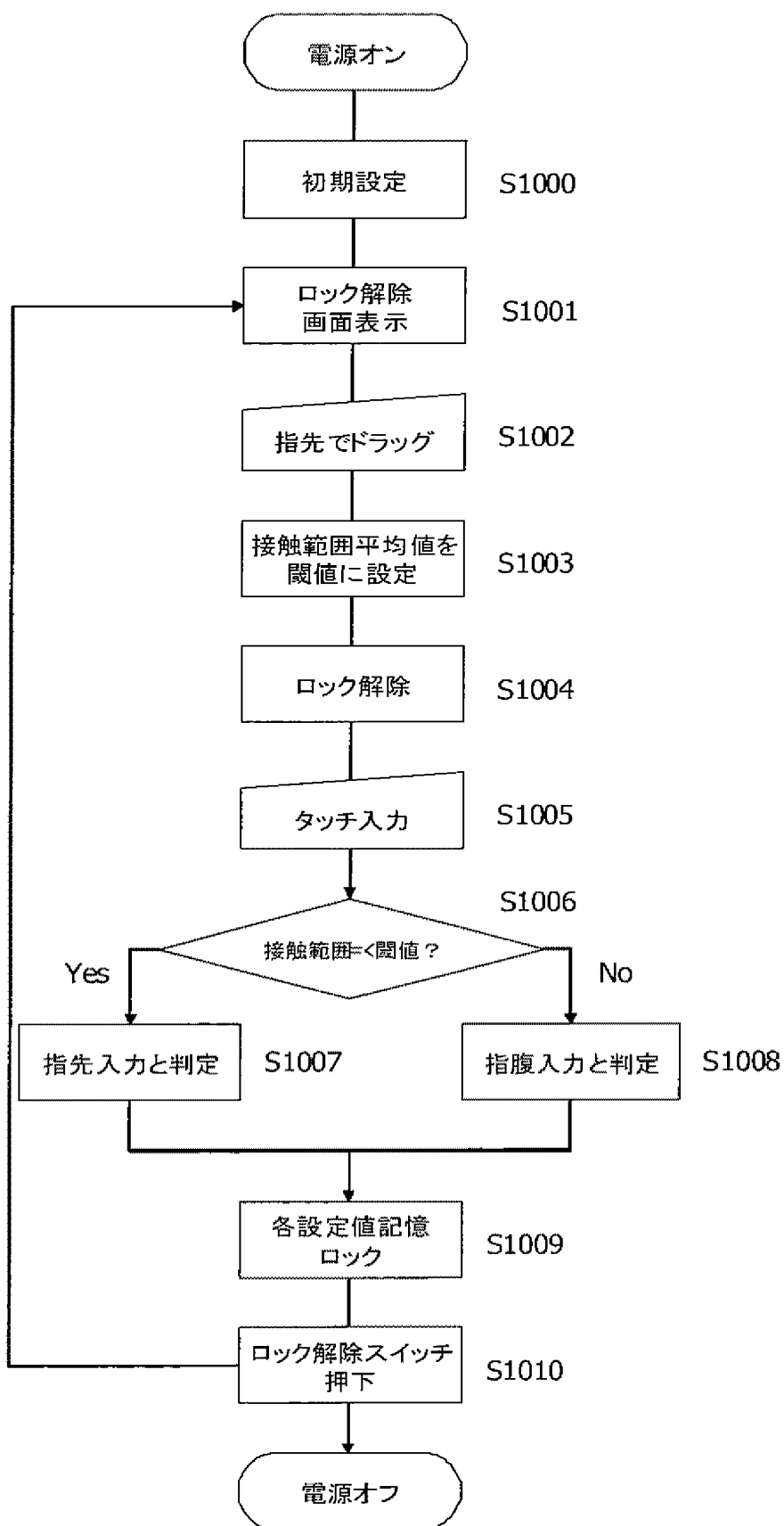


図 2

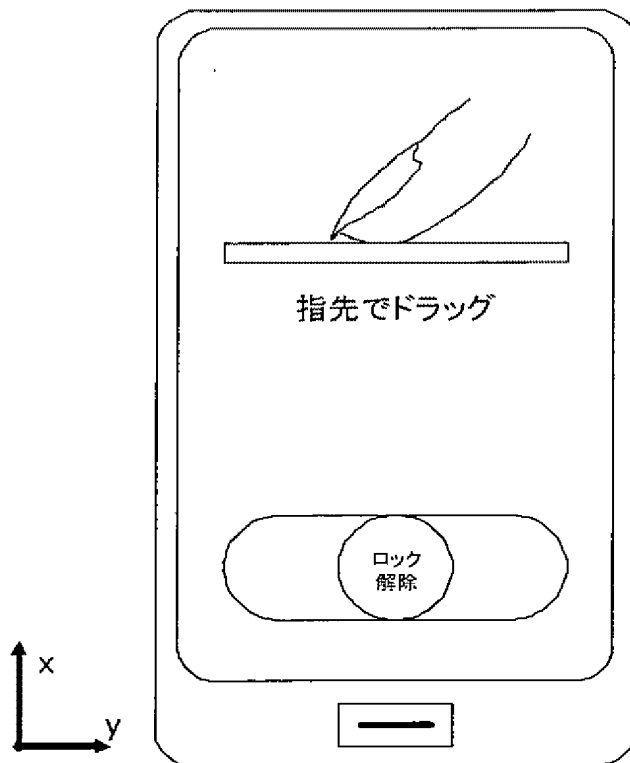
【図 3】

図 3



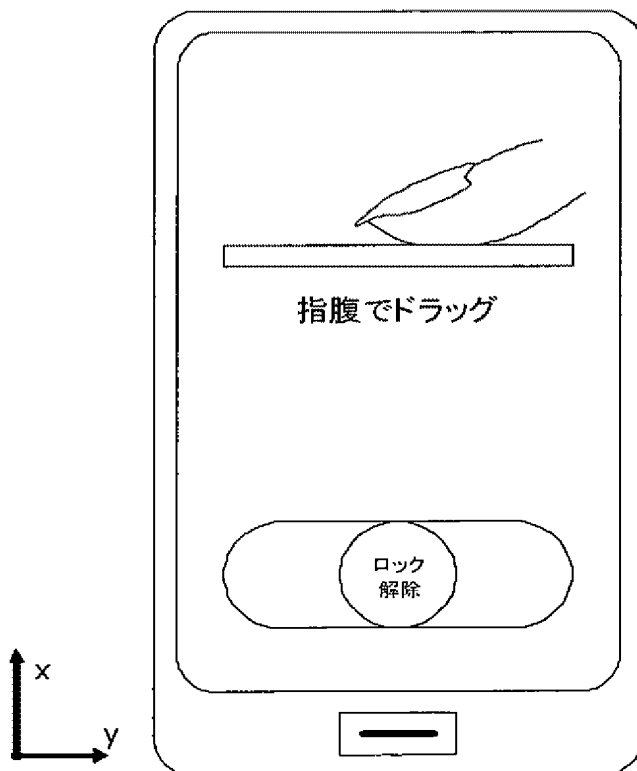
【図4 (a)】

図4 (a)



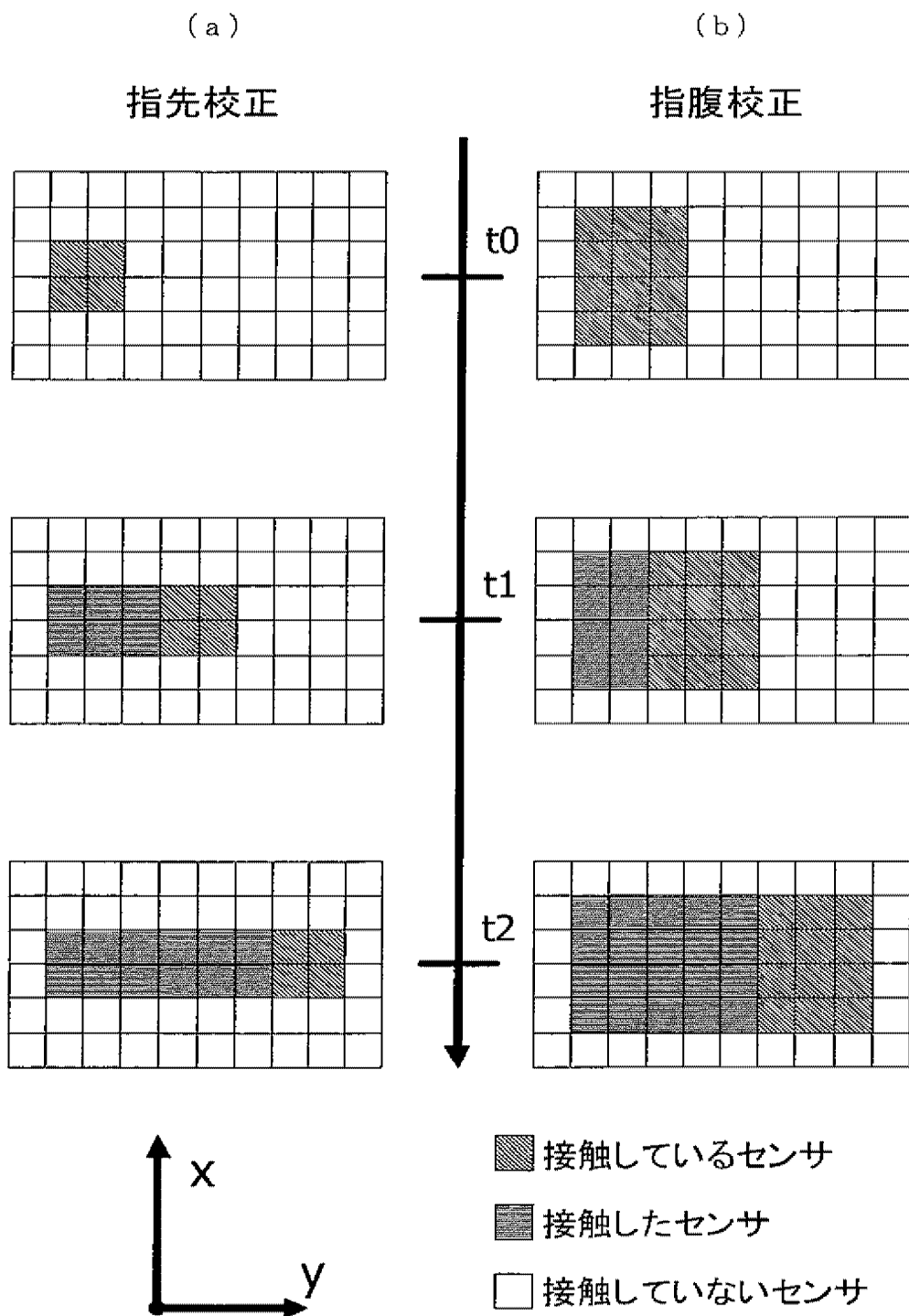
【図4 (b)】

図4 (b)



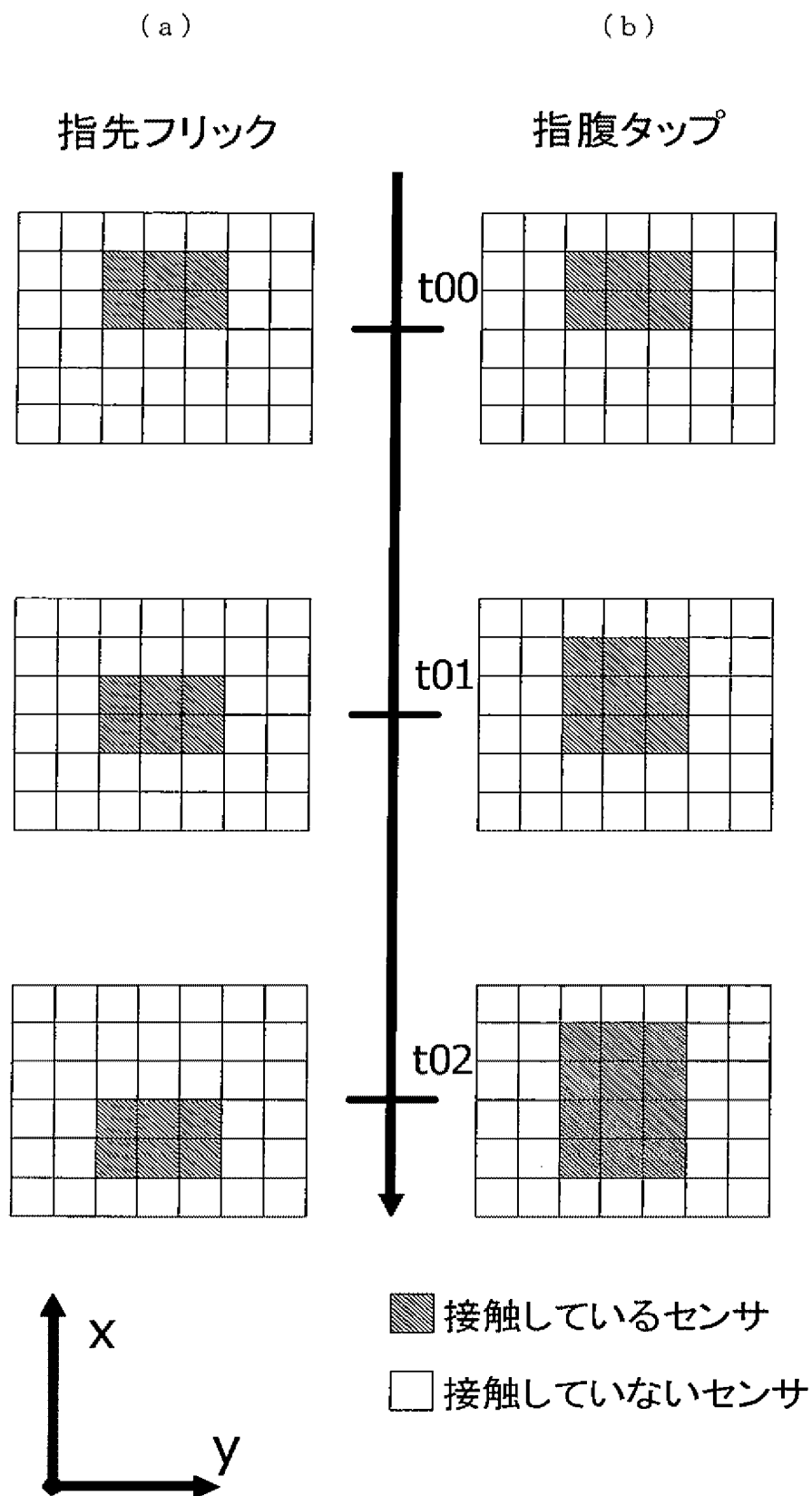
【図 5】

図 5



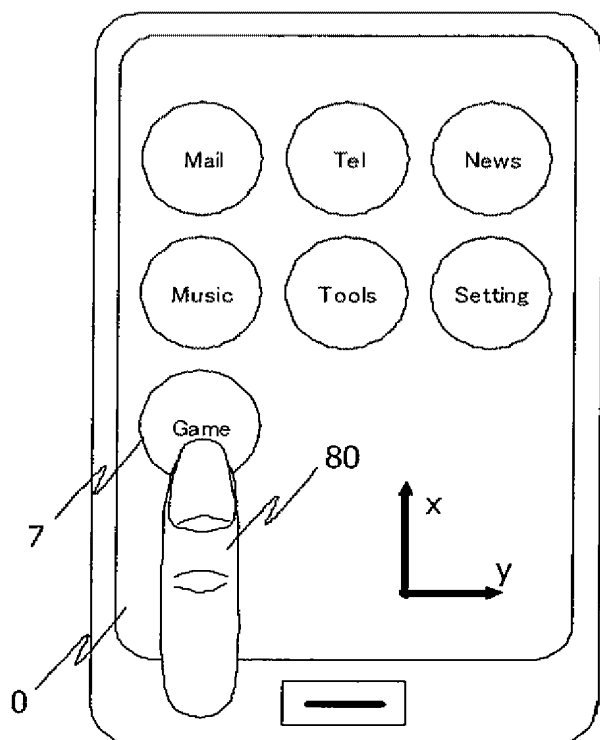
【図 6】

図 6



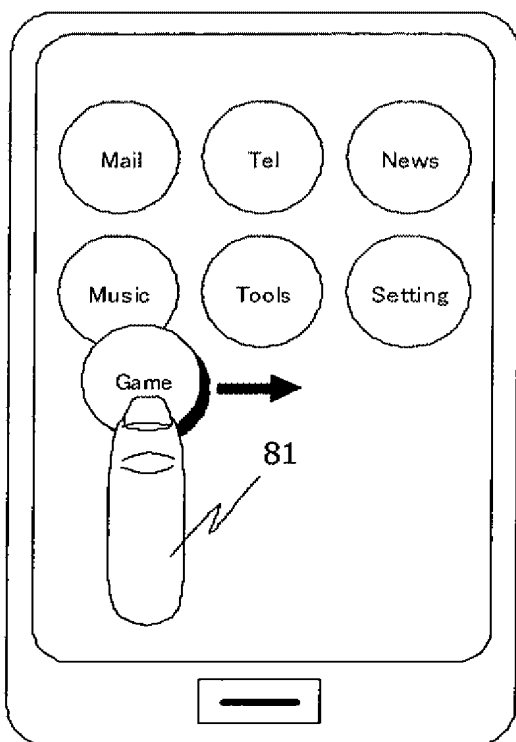
【図 7 (a)】

図 7 (a)



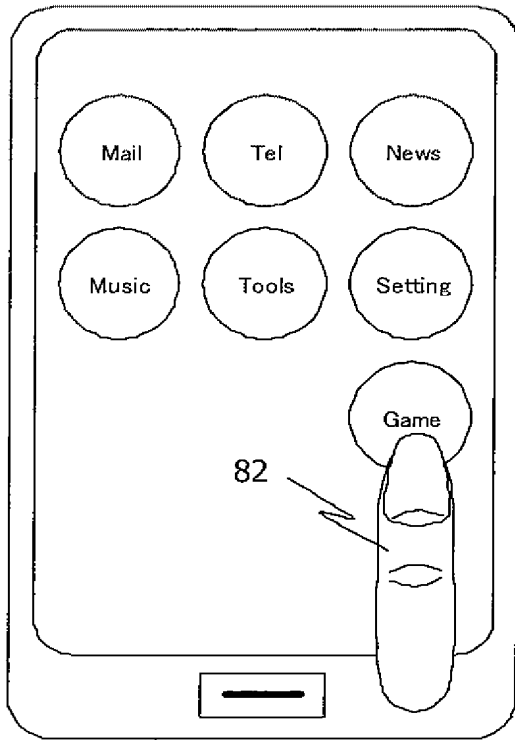
【図 7 (b)】

図 7 (b)



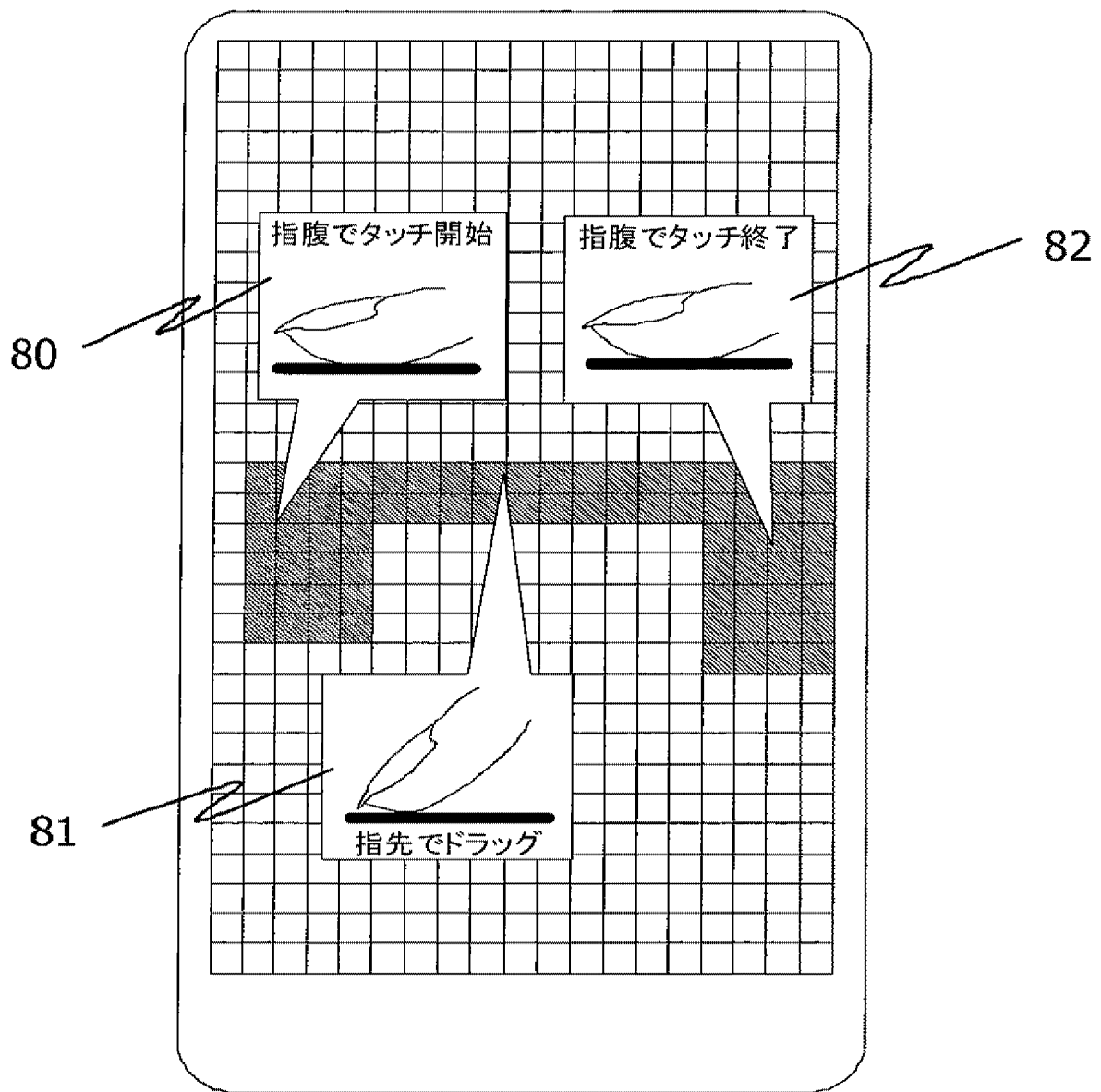
【图 7 (c)】

图 7 (c)



【図 8】

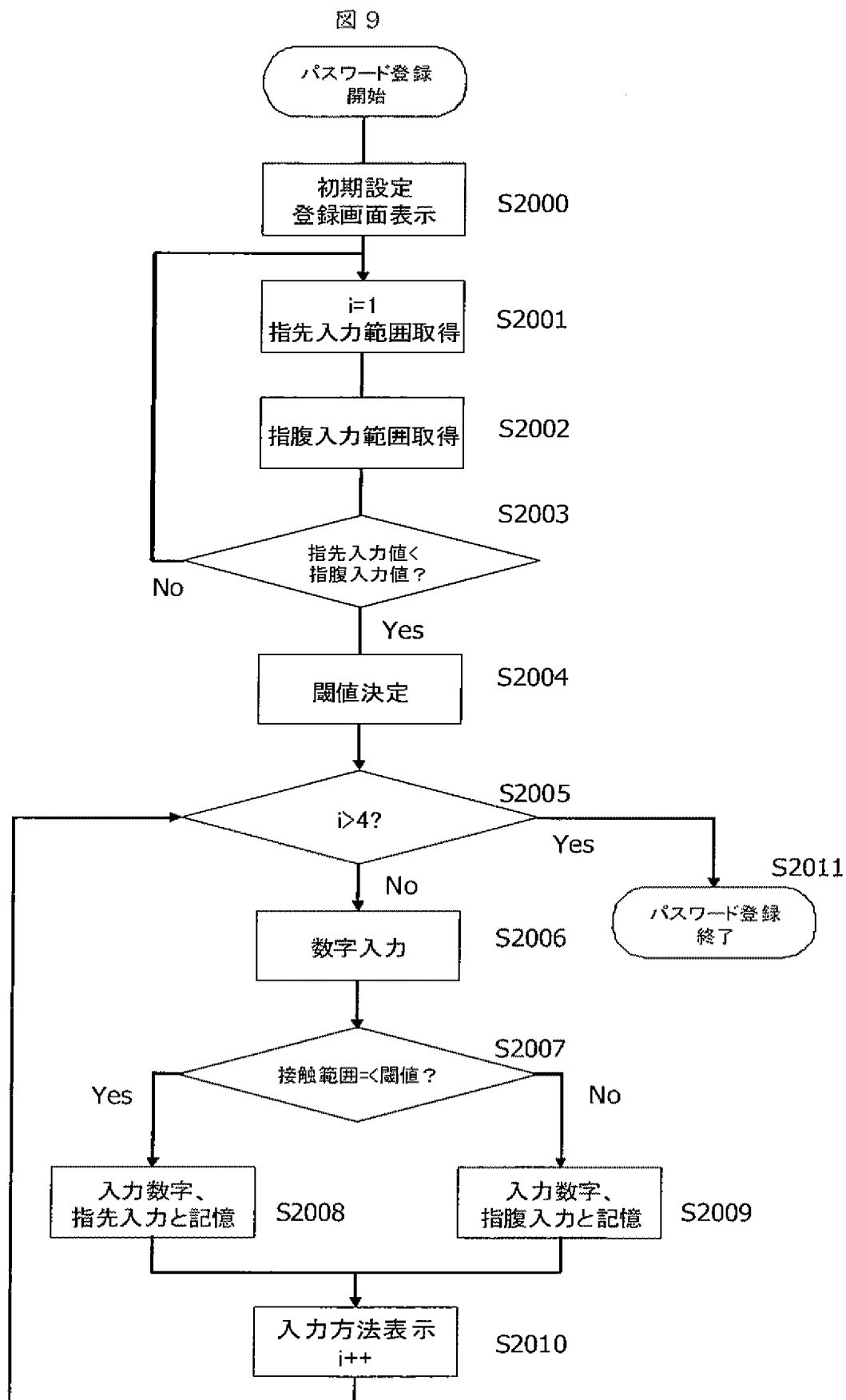
図 8



■ 接触箇所

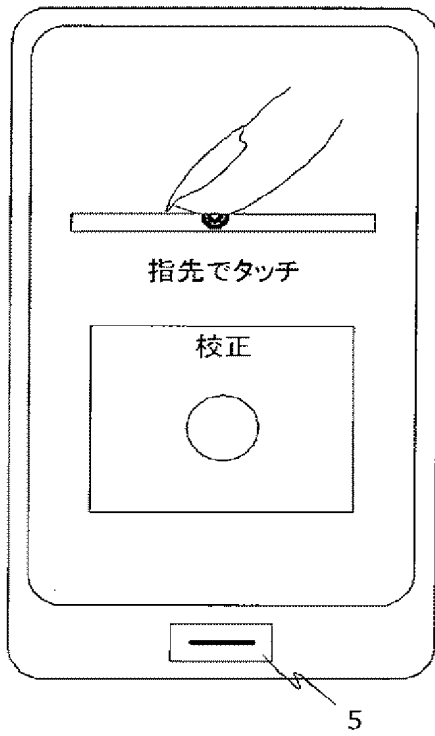
□ 非接触箇所

【図 9】



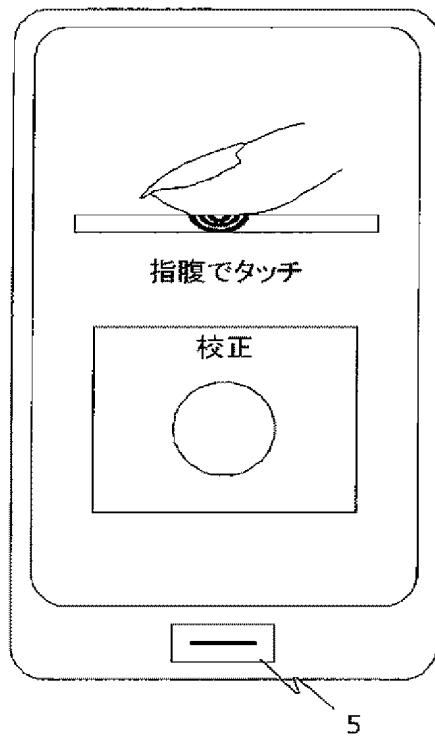
【図10(a)】

図10(a)



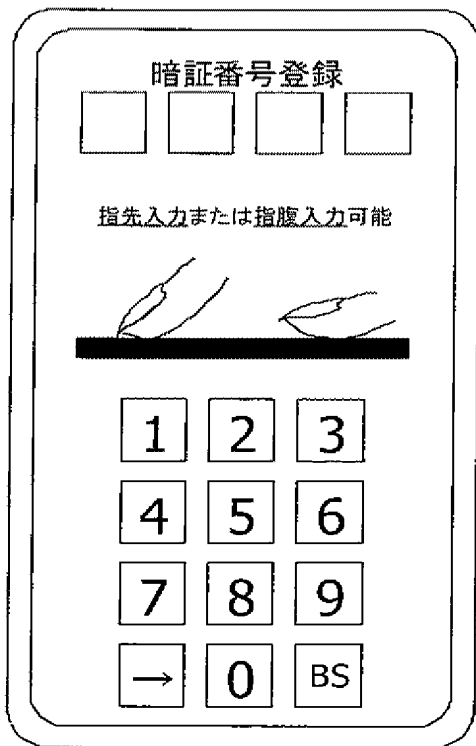
【図10(b)】

図10(b)



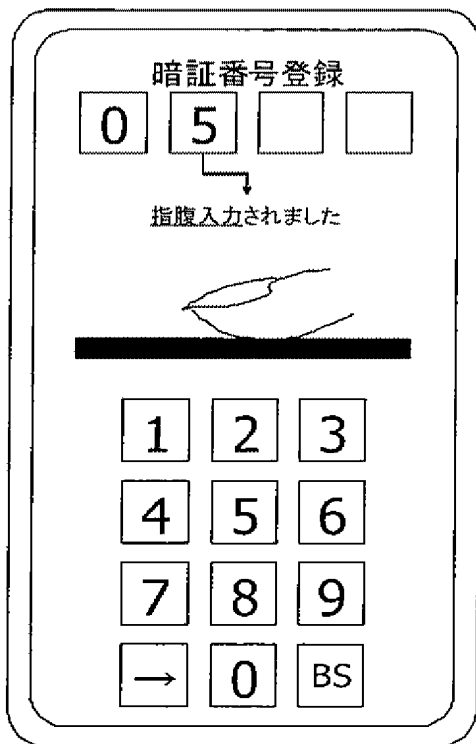
【図 1 1 (a)】

図 1 1 (a)



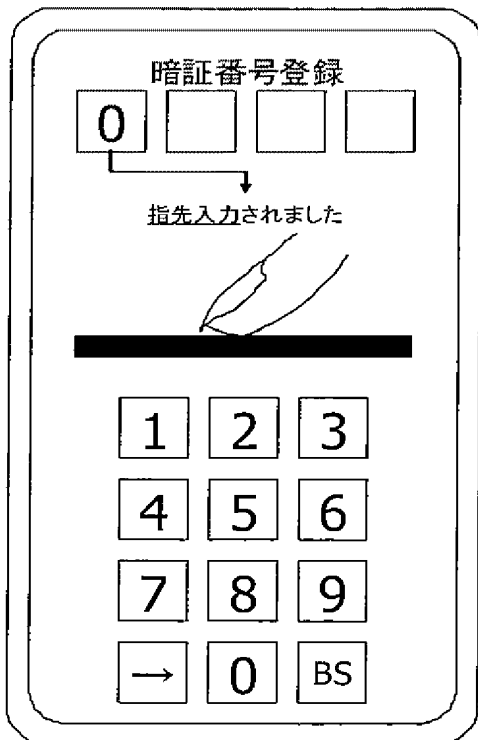
【図 1 1 (b)】

図 1 1 (b)



【図 1 1 (c)】

図 1 1 (c)



【図 1 2 (a)】

図 1 2 (a)

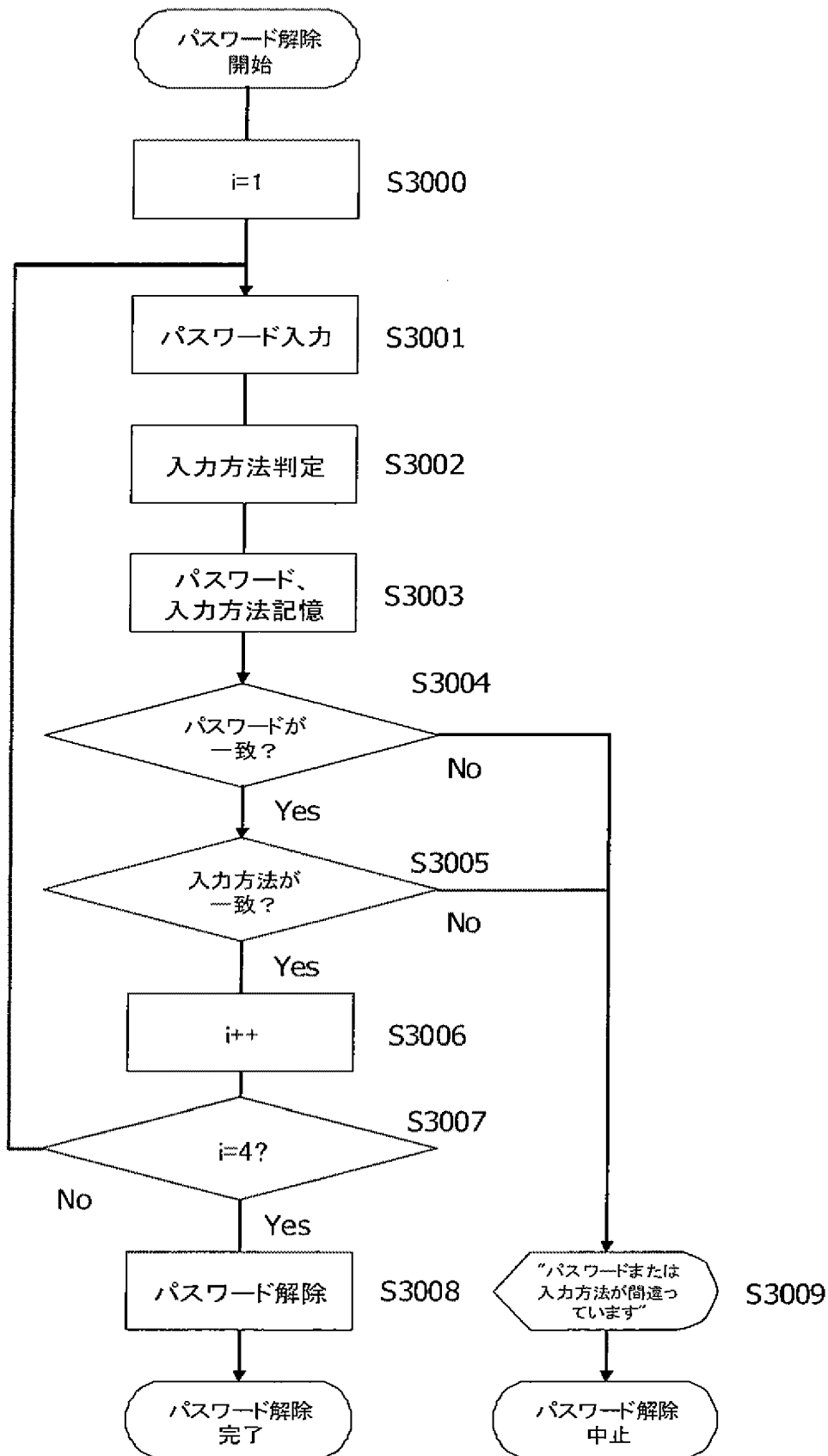
桁	1	2	3	4
パスワード	0	5	2	8
入力方法	指先	指腹	指腹	指腹

【図 1 2 (b)】

図 1 2 (b)

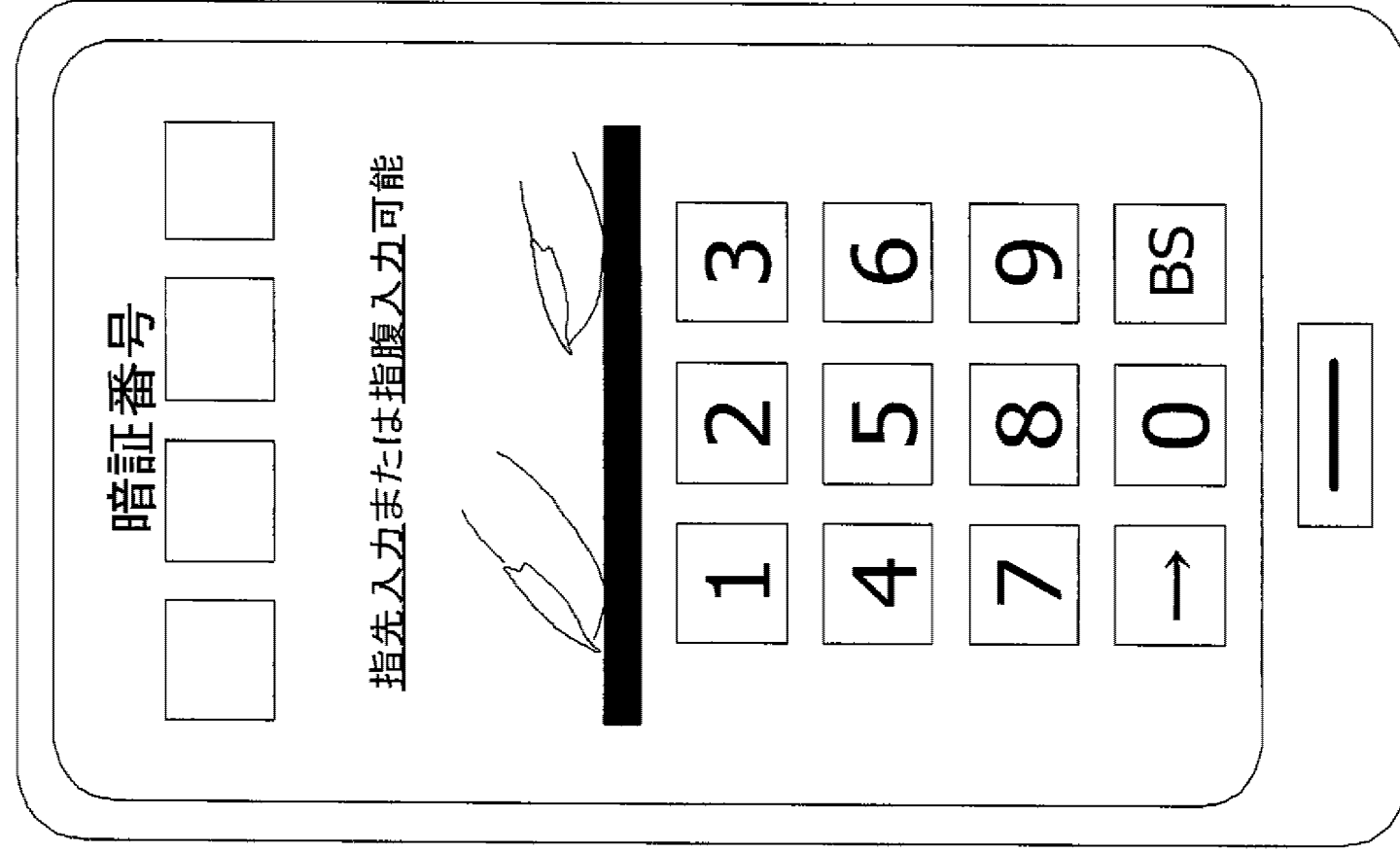
桁		1	2	3	4	動作
パスワード		0	5	2	8	-
入力方法	1	指先	指腹	指腹	指腹	通常待受画面
	2	指先	指先	指先	指先	メール作成画面
	3	指腹	指先	指腹	指先	アプリ起動

図 1 3



【図14】

図14



【書類名】	手続補正書
【提出日】	平成23年 2月 9日
【あて先】	特許庁長官 殿
【事件の表示】	
【出願番号】	特願2011- 25576
【補正をする者】	
【識別番号】	509189444
【氏名又は名称】	日立コンシューマエレクトロニクス株式会社
【代理人】	
【識別番号】	100100310
【弁理士】	
【氏名又は名称】	井上 学
【電話番号】	03-4235-2473
【手数料補正】	
【補正対象書類名】	特許願
【納付金額】	15,000円

出願人履歴

5 0 9 1 8 9 4 4 4

20090703

新規登録

東京都千代田区大手町二丁目2番1号

日立コンシューマエレクトロニクス株式会社



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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/154,993	01/14/2014	Masaaki YAMADA	062758-0345

CONFIRMATION NO. 3897

20277
MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

NOTICE



Date Mailed: 01/31/2014

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
Masaaki YAMADA

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/154,993				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720			
TOTAL CLAIMS (37 CFR 1.16(j))	1	minus 20 = *			OR	x 80 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 = *				x 420 =	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).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
			TOTAL			TOTAL	1600			
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	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))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	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))							OR		
	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". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/154,993	01/14/2014	2642	1740	062758-0345	1	1

CONFIRMATION NO. 3897

20277

MCDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, N.W.
WASHINGTON, DC 20001

FILING RECEIPT



OC000000066309886

Date Mailed: 01/31/2014

Receipt is acknowledged of this non-provisional 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 APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Masaaki YAMADA, Yokohama, JAPAN;

Applicant(s)

Hitachi Consumer Electronics Co., Ltd., Tokyo, JAPAN

Assignment For Published Patent Application

Hitachi Consumer Electronics Co., Ltd., Tokyo, JAPAN

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 13/366,983 02/06/2012 PAT 8654093

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)
JAPAN 2011-025576 02/09/2011

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 01/28/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/154,993**

Projected Publication Date: 05/08/2014

Non-Publication Request: No

Early Publication Request: No

Title

INFORMATION PROCESSING APPARATUS

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

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No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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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.

UTILITY PATENT APPLICATION TRANSMITTAL (ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))		Attorney Docket No. 062758-0345	
		First Named Inventor Masaaki YAMADA	
		Title INFORMATION PROCESSING APPARATUS	
		Express Mail Label No.	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	Commissioner for Patents ADDRESS TO: P.O. Box 1450 Alexandria, VA 22313-1450
1. ☒ Fee Transmittal Form (PTO/SB/17 or equivalent) 2. ☐ Applicant asserts small entity status. See 37 CFR 1.27 3. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent. 4. ☒ Specification [Total Pages <u>27</u>] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement) 5. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>17</u>] 6. Inventor's Oath or Declaration [Total Pages <u> </u>] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e)) a. ☐ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) 7. ☒ Application Data Sheet *See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent) 8. ☐ CD-ROM or CD-R In duplicate, large table, or Computer Program (Appendix) ☐ Landscape Table on CD 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required) a. ☐ Computer Readable Form (CRF) b. Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PARTS 10. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee 11. ☐ 37 CFR 3.73(c) Statement ☐ Power of Attorney (when there is an assignee) 12. ☐ English Translation Document (if applicable) 13. ☒ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached 14. ☒ Preliminary Amendment 15. ☐ Return Receipt Postcard (MPEP § 503) (Should be specifically itemized) 16. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 17. ☐ Nonpublication Request Under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 18. ☐ Other:
*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 must be included in an Application Data Sheet (ADS). (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).	
18. CORRESPONDENCE ADDRESS	
☒ The address associated with Customer Number: <u>20277</u> OR ☐ Correspondence address below	
Name	
Address	
City	State
Country	Zip Code
Telephone	Email
Signature /Brian K. Seidleck/ Date January 14, 2014	
Name (Print/Type) Brian K. Seidleck Registration No. (Attorney/Agent) 51,321	

FEE TRANSMITTAL	Complete if known	
	Application Number	Not Yet Assigned
	Filing Date	January 14, 2014
	First Named Inventor	Masaaki YAMADA
	Examiner Name	Not Yet Assigned
	Art Unit	N/A
☐ Applicant asserts small entity status. See 37 CFR 1.27 ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously		Practitioner Docket No. 062758-0345
TOTAL AMOUNT OF PAYMENT (\$)		1,740.00

METHOD OF PAYMENT (check all that apply)

☐ Check
 ☐ Credit Card
 ☐ Money Order
 ☐ None
 ☐ Other (please identify): _____

☒ Deposit Account
 Deposit Account Number: 50-0417
 Deposit Account Name: McDermott Will & Emery LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below
 ☐ Charge fee(s) indicated below, **except for the filing fee**
☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17
 ☒ Credit any overpayment of fee(s)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES (U = undiscounted fee; S = small entity fee; M = micro entity fee)

Application Type	FILING FEES			SEARCH FEES			EXAMINATION FEES			Fees Paid (\$)
	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	
Utility	280	140*	70	600	300	150	720	360	180	1,600.00
Design	180	90	45	120	60	30	460	230	115	
Plant	180	90	45	380	190	95	580	290	145	
Reissue	280	140	70	600	300	150	2,160	1,080	540	
Provisional	260	130	65	0	0	0	0	0	0	

* The \$140 small entity status filing fee for a utility application is further reduced to \$70 for a small entity status applicant who files the application via EFS-Web.

2. EXCESS CLAIM FEES

Fee Description	Undiscounted Fee (\$)	Small Entity Fee (\$)	Micro Entity Fee (\$)
Each claim over 20 (including Reissues)	80	40	20
Each independent claim over 3 (including Reissues)	420	210	105
Multiple dependent claims	780	390	195

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	Fee (\$)	Fee Paid (\$)
1	- 20 or HP =	x	=			
HP = highest number of total claims paid for, if greater than 20.						
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)			
1	- 3 or HP =	x	=			
HP = highest number of independent claims paid for, if greater than 3.						

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$400 (\$200 for small entity) (\$100 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
41	- 100 =	/50 =	(round up to a whole number) x	=

4. OTHER FEE(S)

Non-English specification, \$130 fee (no small or micro entity discount)

Non-electronic filing fee under 37 CFR 1.16(t) for a utility application, \$400 fee (\$200 small or micro entity)

Other (e.g., late filing surcharge): 1051 Surcharge - Late filing fee, search fee, ... 140.00

SUBMITTED BY			
Signature	/Brian K. Seidleck/	Registration No. (Attorney/Agent)	51,321
		Telephone	(202) 756-8339
Name (Print/Type)	Brian K. Seidleck	Date	January 14, 2014

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	:	Customer Number: 20277
Masaaki YAMADA	:	
	:	
Application No.: Not Yet Assigned	:	Confirmation No.: N/A
	:	
Filed: January 14, 2014	:	Art Unit: N/A
	:	
For: INFORMATION PROCESSING APPARATUS	:	Examiner: Not Yet Assigned

PRELIMINARY AMENDMENT UNDER 37 C.F.R. 1.115

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

Madam:

INTRODUCTORY COMMENTS

Prior to examination on the merits, please amend the above-identified U.S. patent application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Abstract begin on page 3 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 4 of this paper.

Remarks/Arguments begin on page 5 of this paper.

AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

Please amend the paragraph after the Title and before the “BACKGROUND OF THE INVENTION”

~~The present application claims priority from~~ This application is the Continuation of US Application No. 13/366,983, filed on February 6, 2012, which claims the benefit of Japanese patent application serial no. JP2011-025576, filed on February 9, 2011, the content of which is hereby incorporated by reference into this application the disclosures of which Applications are incorporated by reference herein.

AMENDMENTS TO THE ABSTRACT

Please substitute the following paragraph(s) for the abstract now appearing in the currently filed specification:

ABSTRACT OF THE DISCLOSURE

An information processing apparatus includes a touch panel which displays pieces of identification information including letters, figures, and symbols and detects a contact of the panel with a finger of a user or other object. When the touch panel detects the contact of the panel, a detection unit specifies identification information of one or more of the multiple pieces of identification information displayed on the touch panel, indicated by a position at which the contact in question occurred. The detection unit also detects an area of part of the panel where the contact occurred. A storage unit stores reference identification information and a reference area range. A control unit performs particular processing upon matching of the detected identification information with the stored reference identification information and the area of the contact detected by the detection unit falling within the stored reference area range.

AMENDMENTS TO THE CLAIMS

1. (Original) An information processing apparatus comprising:

a touch panel which displays a plurality of pieces of identification information and detecting a contact of the panel with an object of interest;

a detection unit, when the touch panel detects a contact with the object, which specifies identification information indicated by a position at which the contact in question occurred, of the multiple pieces of identification information displayed on the panel, and which detects an area of part where the contact occurred;

a storage unit which stores reference identification information and a reference area range;

a determination unit which determines whether the identification information detected by the detection unit matches the reference identification information stored in the storage unit and whether the area of the contact detected by the detection unit falls within the reference area range stored in the storage unit; and

a control unit which performs particular processing on condition the determination unit determines that the identification information detected by the detection unit matches the reference identification information stored in the storage unit and the area of the contact detected by the detection unit falls within the reference area range stored in the storage unit.

2.-7. (Canceled)

REMARKS

The specification in the above-referenced application has been amended to incorporate the continuity information. Claim 1 is pending. Claims 2-7 have been canceled. The abstract has been replaced. No new matter has been introduced. Entry of this amendment is respectfully requested.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0417, under Order No. 062758-0345 from which the undersigned is authorized to draw.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP



Brian K. Seidleck
Registration No. 51,321

500 North Capitol Street, N.W
Washington, DC 20001
Phone: (202) 756-8339 BKS:sm
Facsimile: (202) 756-8087
Date: January 14, 2014

**Please recognize our Customer No. 20277 as
our correspondence address.**

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	INFORMATION PROCESSING APPARATUS			
First Named Inventor/Applicant Name:	Masaaki YAMADA			
Filer:	Brian K. Seidleck			
Attorney Docket Number:	062758-0345			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Late Filing Fee for Oath or Declaration	1051	1	140	140
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 (\$)				1740

Electronic Acknowledgement Receipt

EFS ID:	17911166
Application Number:	14154993
International Application Number:	
Confirmation Number:	3897
Title of Invention:	INFORMATION PROCESSING APPARATUS
First Named Inventor/Applicant Name:	Masaaki YAMADA
Customer Number:	20277
Filer:	Brian K. Seidleck/Shante Morgan
Filer Authorized By:	Brian K. Seidleck
Attorney Docket Number:	062758-0345
Receipt Date:	14-JAN-2014
Filing Date:	
Time Stamp:	17:15:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1740
RAM confirmation Number	3894
Deposit Account	500417
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:
Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS_062758-0345.pdf	1502975	no	6
			5de9793c2f168810c8a9df00a4fd95a6d6c572f5		
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SB08_062758-0345.pdf	612316	no	4
			85d04b89c163f391b1bbb8e2ca5f54698473baa26		
Warnings:					
Information:					
3		SPEC_062758-0345.pdf	2546404	yes	27
			ff427bf8de6a94406258efd1e90d546ccdeef5cb		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	21	
	Claims		22	26	
	Abstract		27	27	
Warnings:					
Information:					
4	Drawings-only black and white line drawings	DRAW_062758-0345.pdf	1220415	no	17
			61b850e9844b2c8f97a225d58e6fe4f3c716de5e		
Warnings:					
Information:					
5		TRANS_062758-0345.PDF	155976	yes	7
			b67fe5113ef274875dd841baeebd1b24aff73fe7		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal of New Application		1	1	
	Miscellaneous Incoming Letter		2	2	
	Preliminary Amendment		3	3	

	Specification	4	4
	Abstract	5	5
	Claims	6	6
	Applicant Arguments/Remarks Made in an Amendment	7	7

Warnings:

Information:

6	Fee Worksheet (SB06)	fee-info.pdf	36495	no	2
			f04272454071fac040c5a42beea770765044f0e6		

Warnings:

Information:

Total Files Size (in bytes):			6074581
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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

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.

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	062758-0345
		Application Number	
Title of Invention	INFORMATION PROCESSING APPARATUS		
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
	Masaaki		YAMADA	
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service				
City	Yokohama	Country of Residence i	JP	
Mailing Address of Inventor:				
Address 1		c/o Hitachi, Ltd., Intellectual Property Group		
Address 2		6-1, Marunouchi 1-chome, Chiyoda-ku		
City	Tokyo	State/Province		
Postal Code	100-8220	Country i	JP	
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	20277		
Email Address	ipdocketmwe@mwe.com	Add Email	Remove Email

Application Information:

Title of the Invention	INFORMATION PROCESSING APPARATUS		
Attorney Docket Number	062758-0345	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	17	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	062758-0345
		Application Number	
Title of Invention	INFORMATION PROCESSING APPARATUS		

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.											
<table border="1"> <tr> <td>Please Select One:</td> <td>☒ Customer Number</td> <td>☐ US Patent Practitioner</td> <td>☐ Limited Recognition (37 CFR 11.9)</td> </tr> <tr> <td>Customer Number</td> <td colspan="3">20277</td> </tr> </table>				Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)	Customer Number	20277		
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)								
Customer Number	20277										

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this 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.			
Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13366983	2012-02-06
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

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(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(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 ^j (if applicable)
2011-025576	JP	2011-02-09	
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	062758-0345
		Application Number	
Title of Invention	INFORMATION PROCESSING APPARATUS		

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.
--------------------------	--

Authorization to Permit Access:

☒	Authorization to Permit Access to the Instant Application by the Participating Offices
If 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 World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.	

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	062758-0345
		Application Number	
Title of Invention	INFORMATION PROCESSING APPARATUS		

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	Hitachi Consumer Electronics Co., Ltd.			
Mailing Address Information:				
Address 1	2-1, Otemachi 2-chome, Chiyoda-ku			
Address 2				
City	Tokyo	State/Province		
Country ⁱ	JP	Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button. Add				

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.	
Assignee 1	
Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section 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), as the patent application publication will include the name of the applicant(s).	
Remove	
If the Assignee is an Organization check here. ☐	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	062758-0345
		Application Number	
Title of Invention	INFORMATION PROCESSING APPARATUS		

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		State/Province	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the Add button.

Add

Signature:

Remove

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

Signature	/Brian K. Seidleck/		Date (YYYY-MM-DD)	2014-01-14
First Name	Brian	Last Name	Seidleck	Registration Number
				51321

Additional Signature may be generated within this form by selecting the Add button.

Add

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date		2014-01-14	
	First Named Inventor	Masaaki YAMADA		
	Art Unit	N/A		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	062758-0345		

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	5844547		1998-12-01	Minakuchi et al.	Corresponds to JP 5-100809-A

If you wish to add additional U.S. Patent citation information please click the Add button.

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U.S.PATENT APPLICATION PUBLICATIONS						Remove
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	20050162407		2005-07-28	Sakurai et al.	Corresponds to JP 2005-202527-A

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2005-202527	JP	A	2005-07-28	Fujitsu Component Ltd		☐
	2	5-100809	JP	A	1993-04-23	FUJITSU LTD		☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2014-01-14
	First Named Inventor	Masaaki YAMADA	
	Art Unit	N/A	
	Examiner Name	Not Yet Assigned	
	Attorney Docket Number	062758-0345	

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
	1	Entire Prosecution of US Application No. 13/366,983 to YAMADA entitled "INFORMATION PROCESSING APPARATUS"	☐

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	
Filing Date	2014-01-14
First Named Inventor	Masaaki YAMADA
Art Unit	N/A
Examiner Name	Not Yet Assigned
Attorney Docket Number	062758-0345

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	/Brian K. Seidleck/	Date (YYYY-MM-DD)	2014-01-14
Name/Print	Brian K. Seidleck	Registration Number	51321

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 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.
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SPECIFICATION

TITLE OF THE INVENTION

INFORMATION PROCESSING APPARATUS

5

CLAIMS OF PRIORITY

The present application claims priority from Japanese patent application serial no. JP2011-025576, filed on February 9, 2011, the content of which is hereby incorporated by reference
10 into this application.

BACKGROUND OF THE INVENTION

The present invention relates to information processing apparatuses.

15 JP-A-05-100809 discloses art related to the technical field of the present invention. The publication describes "An information processing apparatus including a touch panel device at least comprising: a physical type of an object; display position information on a display; file information where a status of the object is set; a display information table 1
20 storing display data of the object that includes a name of a file in a normal state and a name of the file in a special state (reversed display); and touch panel information 2 including a touch position coordinate and touch pressure information. A

physical operation decided by a corresponding relation between physical information indicated by the display information table 1 and physical information indicated by the touch panel information 2 is given to the object to display it."

5 Recently, information processing apparatuses for portable usage have become multi-functioned and ease of use thereof is particularly required.

 An object of the present invention is to provide an information processing apparatus that offers improved
10 convenience to users.

SUMMARY OF THE INVENTION

 To solve the foregoing problem, an aspect of the present invention provides an information processing apparatus
15 comprising: a touch panel which displays a plurality of pieces of identification information including letters, figures, and symbols, and for detecting a contact of the panel with a finger of a user or other objects; a detection unit, when the touch panel detects a contact of the panel with the object, which
20 species identification information indicated by a position of the contact at which the contact in question occurred, of the multiple pieces of identification information displayed on the touch panel, and which detects an area of part where the contact occurred; a storage unit which stores reference identification

information and a reference area range; a determination unit which determines whether the identification information detected by the detection unit matches the reference identification information stored in the storage unit and
5 whether the area of the contact detected by the detection unit falls within the reference area range stored in the storage unit; and a control unit which performs particular processing when the determination unit determines that the identification information detected by the detection unit matches the reference
10 identification information stored in the storage unit and the area of the contact detected by the detecting unit falls within the reference area range stored in the storing unit.

By employing such system, an information processing apparatus including a touch panel can be improved in usability.

15

BRIEF DESCRIPTION OF DRAWINGS

The present invention will be described hereinafter with reference to the accompanying drawings.

Fig. 1A is a schematic illustration of a user touching
20 a touch panel 1 with a finger tip to make an input.

Fig. 1B is a schematic illustration of a user touching the touch panel 1 with a finger pad to make an input.

Fig. 2 is an illustration showing an example of the internal configuration of a portable terminal 0 including the

touch panel 1.

Fig. 3 is a flow chart showing a lock cancellation process of the portable terminal 0.

Fig. 4A is an illustration showing a typical screen image
5 displayed during when the portable terminal 0 is to be unlocked by dragging with a finger tip.

Fig. 4B is an illustration showing a typical screen image displayed during when the portable terminal 0 is to be unlocked by dragging with a finger pad.

10 Figs. 5A and 5B are illustrations showing schematically states of sensors 4 at various timing during lock cancellation.

Figs. 6A and 6B are illustrations showing a method for distinguishing between a finger tip flicking and a finger pad tapping.

15 Fig. 7A is an illustration showing one state during an icon being moved; the state before the move has started.

Fig. 7B is an illustration showing one state during the icon being moved; the state when the icon is being moved.

Fig. 7C is an illustration showing one state during the
20 icon being moved; the state after the move has finished.

Fig. 8 is an illustration showing schematically the sensors 4 when the icon is moved.

Fig. 9 is a flow chart for password registration.

Fig. 10A is an illustration showing a typical screen image

displayed during calibration to prompt the user to make a finger tip contact.

Fig. 10B is an illustration showing a typical screen image displayed during calibration to prompt the user to make a finger
5 pad contact.

Fig. 11A is an illustration showing a screen that prompts the user to register a password.

Fig. 11B is an illustration showing a screen displayed during password registration to inform the user that a finger
10 pad input has been made.

Fig. 11C is an illustration showing a screen displayed during password registration to inform the user that a finger tip input has been made.

Fig. 12A is a table showing data composed of a password
15 and a corresponding input method.

Fig. 12B is a table showing data composed of one password and a plurality of corresponding input methods.

Fig. 13 is a flow chart for password cancellation.

Fig. 14 is an illustration showing a screen that prompts
20 the user to cancel a password.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[First Embodiment]

Preferred embodiments of the present invention will be

described below with reference to the accompanying drawings.

Figs. 1A and 1B are illustrations showing methods by which a user makes a desired input in a portable terminal 0 according to a first preferred embodiment of the present invention. The portable terminal 0 shown in Figs. 1A and 1B includes a touch panel 1 having a touch sensor function. Fig. 1A is an image of a user making input by touching the touch panel 1 with his or her finger tip. The input using one's finger tip is characterized in that an area of contact (hereinafter referred also to as a "contact range") between the finger of the user and the touch panel 1 is small. This operation by the user will hereinafter be referred to as a finger tip input. Fig. 1B schematically shows an image of a user making input by touching the touch panel 1 with his or her finger pad. The input using one's finger pad is characterized in that the contact range of the finger and the touch panel 1 is wider than that of the finger tip input. This operation by the user will hereinafter be referred to as a finger pad input.

Fig. 2 is an illustration showing a typical internal arrangement of the portable terminal 0. Reference numeral 1 denotes a touch panel that includes a group of sensors or a sensor 4, a liquid crystal panel, and a glass panel. When the user's finger contacts with the touch panel, capacitance of the sensor 4 changes and the sensor 4 outputs a signal according to the

change. The liquid crystal panel displays numerals, letters, and the like. The glass panel is for protecting the sensor 4, etc. Reference numeral 2 denotes a contact range detection unit that detects the position and the contact range of a contact based on the signal output from the sensor 4. Reference numeral 3 denotes a control unit for controlling elements of the touch panel 1. The control unit 3 includes an arithmetic section, a counter, a determination unit which determines condition in accordance with input information into the control unit 3, and a storage unit which stores various types of data. Reference numeral 4 denotes, as mentioned, a group of sensors or a sensor whose capacitance varies upon contact with the user's finger. Portions shaded with diagonal lines represent sensors 4 that are responding to the contact with the finger. The blank portions represent sensors 4 that are not contacting with the finger and not responding. Reference numeral 5 denotes a button switch which the user pushes for various operations such as standby release or returning, advancing.

The way of calibration and the usage method for cancelling the lock or unlocking the portable terminal 0 according to the first embodiment will be described below with reference to Fig. 3 showing a flow chart, Figs. 4A and 4B showing lock cancellation display screens, and Figs. 5A and 5B showing states of the sensor 4 at various timing during lock cancellation.

Among types of operation performed by the user on the portable terminal 0 are tapping, dragging, flicking, and pinching. Tapping is an operation which the user touches one point of the screen with a finger for a moment on the touch panel

5 1. Dragging is an operation which the user moves his or her finger over the screen of the touch panel 1 while the finger is in contact therewith. Flicking is an operation which the user quickly slides his or her finger on the screen of the touch panel 1 while touching it. Pinching is an operation which the
10 user touches two points of the screen of the touch panel 1 with two fingers and changes the distance between the two points.

A series of operations from start-up of the portable terminal 0, calibration, and to turn-off of the portable terminal 0 will be next described. The term calibration used
15 herein refers to an operation of setting a threshold value that is used for determining a contact range.

The power of the portable terminal turns on by pressing the button switch for a certain time. Then, the control unit 3 starts a program, adjusts the sensors, initializes the
20 threshold value, and performs initial settings for screen display and other factors (S1000). After the initial setting procedure, the control unit 3 performs control to display lock cancel screen on the touch panel 1 (S1001). As can be seen in Fig. 4A, a lock cancel icon is present in the lock cancel screen

which can be dragged in a y direction and a -y direction with a finger tip. The control unit 3 holds until the user drags the lock cancel icon with a finger tip (S1002).

Fig. 5A is a schematic view showing states of the sensor 4 at various timing during when the user drags the icon with a finger tip in the y direction for unlocking. In Fig. 5A, portions shaded with diagonal lines denote sensors 4 that are responding to the contact with a user's finger and portions shaded with horizontal lines denote sensors 4 that have responded in previous. The blank portions denote sensors 4 that have not been contacted and have not responded. The icon is first touched at time t0, and is dragged at time t1, and the dragging ends at time t2 to thus cancel the lock. The control unit 3 calculates the average value '2' of the number of columns of sensors 4 that responded to the contact with the finger and adds a correction value '1' to the average, thereby defining a threshold value '3'. The threshold value is stored in the control unit 3.

Fig. 4B shows another method for unlocking the terminal using the finger pad input. As can be seen in Fig. 4B, a lock cancel icon is displayed in the lock cancel screen that can be dragged in a y direction and a -y direction with a finger pad. Fig. 5B is a schematic view showing states of the sensor 4 at various timing during when the user drags the icon for cancelling

the lock with a finger pad in the y direction for unlocking. The icon is first touched at time t0, then dragged at time t1, and the dragging ends at time t2 to thus cancel the lock. The control unit 3 calculates the average value '4' of the number
5 of columns of sensors 4 that responded to the contact with the finger and subtracts a correction value '1' therefrom, thereby defining a threshold value '3'. The threshold value is stored in the control unit 3.

The threshold value used for determining the contact
10 range is defined as above by using the average value of the number of columns of sensors 4 that responded to the contact with the finger during unlocking (S1003). In other words, the threshold value for determining the contact range can be obtained (i.e., calibration can be made), simultaneously with unlocking
15 operation.

The control unit 3 unlocks the portable terminal 0 (S1004) and waits until the user makes various inputs by way of the touch panel 1 (S1005). Receiving an input with a contact range equal to or narrower than the threshold value (specifically, "3" or
20 less) (S1006), the control unit 3 determines that a finger tip input is made (S1007). Receiving an input with a contact range wider than the threshold value (specifically, "4" or more) (S1006), the control unit 3 determines that a finger pad input is made (S1008). After that, various operations are performed

following the order of the input.

When no input is made for a predetermined period, several minutes for example, the control unit 3 stores the time and date of calibration, the threshold value, and other setting values, and then locks the portable terminal 0 (S1009). The control unit 3 displays the lock cancel screen (S1001) when a lock cancel switch assigned to the button switch 5 is pushed (S1010). When the button switch 5 is pressed for a certain time while the power of the portable terminal 0 is on, the power turns off.

As described heretofore, regardless of difference with individuals in contact ranges of finger tip input, the calibration allows accuracy of contact range determination to be improved. The first embodiment of the present invention uses the average of the number of columns of the sensors 4 that responded to the contact with the finger as the threshold value. However, this is not the only possible way for setting the threshold. For example, the threshold value may be corrected by adding an appropriate value to, or subtracting any value from, the average of the number of columns of the sensors 4 that responded to a contact with a finger. The threshold value does not need to be an integer and instead a capacitance value may be used. Further, the threshold value used for determining the contact range may be discarded upon locking, and calibration can be performed to update threshold value every time the

terminal is unlocked. Instead of performing calibration upon unlocking, calibration may be performed only at the first time the portable terminal 0 is turned on. It may also be performed by selecting a function for calibration from a setting menu or
5 the like. Furthermore, the first embodiment of the present invention performed calibration on the basis of the contact range of either the finger tip input or the finger pad input. Alternatively, the contact ranges of both the finger tip input and the finger pad input may be obtained to set a plurality of
10 threshold values.

A method for distinguishing the finger tip input and the finger pad input will be described in more details below. Figs. 6A and 6B show a method for distinguishing flicking by finger tip input and tapping by finger pad input. Fig. 6A shows
15 conditions of sensors 4 responding to a finger tip flicking in a -x direction. Fig. 6B shows conditions of sensors 4 responding to a finger pad tapping. At time t00 which is the time a contact starts, the number of sensors responding to the contact is same in Figs. 6A and 6B. The control unit 3 stores the time t00 at
20 which the contact is started. If the number of sensors responding to the contact range would not change at the subsequent time t01 and time t02, the control unit 3 determines the contact as a finger tip flicking. If the number of sensors responding increases as time elapses as the time t01 and the

time t02, the control unit 3 determines the contact as a finger pad tapping. In brief, the control unit 3 distinguishes the finger tip flicking and the finger pad tapping by comparing the number of sensors that responded at the time t00 to the number
5 of sensors responding at the time t02. Since the determination is not done at the instance of a user touching the touch panel 1, a finger pad input will not be misdetected as a finger tip input even when the initial contact range is narrow.

A way of moving an icon utilizing the difference between
10 contact ranges of the finger tip input and the finger pad input will be described in detail below. Figs. 7A to 7C show states of an icon 7 moved rightwardly (in a y direction) by the user using finger tip input and finger pad input. Fig. 8 is a schematic view showing the sensors 4 that responded during the
15 icon movement and the manner of finger movement. Reference numerals 80 and 82 represent fingers making finger pad input with a wide contact range and reference numeral 81 represents a finger making finger tip input with a narrow contact range. First, a user touches the icon 7 desired to be moved with the
20 finger pad input 80. When the contact range is equivalent to or larger than the threshold value, the control unit 3 determines that the input is the finger pad input 80 and sets the icon 7 as a moving object (Fig. 7A). The user then shifts from the finger pad input 80 to the finger tip input 81 while keeping

his or her finger in contact with the panel. As the contact range becomes equal to or less than the threshold value, the control unit 3 renders the icon 7 as the moving object movable (Fig. 7B). The user drags the icon 7 to a desired position and then shifts from the finger tip input 81 to the finger pad input 82. As the contact range becomes equivalent to or larger than the threshold value, the control unit 3 determines that the input is the finger pad input 82 and validates the position of the icon 7 (Fig. 7C).

As described above, the first embodiment allows the user to make more intuitive input. The contact range described herein may be the number of sensors responded or the maximum number of the columns of sensors responded. When an application for finger pad input with a wide contact area is not set or applied to the terminal, the process of determining contact area can be omitted and contact operation may be performed uniformly.

[Second Embodiment]

A second embodiment of the present invention relates to a portable terminal 0 using a password. The second embodiment is characterized in that it stores not only a numeric password but also a difference in the contact range with the aim of enhancing security. A description is made for an example of the enhanced security function that incorporates a four-digit

password and a difference in the contact range with reference to; Fig. 9 showing a flow chart of password registration, Figs. 10A and 10B showing typical screen images displayed during calibration, Figs. 11A to 11C showing screen images for
5 prompting a user to register a password, and Figs. 12A and 12B showing data consisting of a password and a set of corresponding input method. The portable terminal 0 according to the second embodiment has the same configuration as that of the portable terminal 0 according to the first embodiment unless otherwise
10 specified.

The process for password registration will be first described with reference to the flow chart of Fig. 9. After initial settings such as counter reset is done, an image as shown in Fig. 10A is displayed to prompt the user to make a finger
15 tip contact (S2000). A control unit 3 records the contact range of the finger tip input (S2001). Next, an image as shown in Fig. 10B is displayed to prompt the user to make a finger pad contact. The control unit 3 records the contact range of the finger pad input (S2002). Contact ranges are detected at the
20 timing when a button switch 5 is pushed following the contact with finger tip or finger pad. When the contact range of the finger pad input is larger than that of the finger tip input, the control unit 3 authorizes the input as a correct input (S2003: Yes). The contact range of the finger tip input is

determined as a threshold value and the value is stored (S2004). When the contact range of the finger pad input is smaller than that of the finger tip input (S2003: No), the control unit 3 prompts the user to make a finger tip input again (S2001).

5 Completing the determination of a threshold value, the control unit 3 next checks the counter value. When the counter is 4 or less (S2005: No), the control unit 3 displays a message to inform the user that a password can be input by either the finger tip input or the finger pad input (Fig. 11A). Registration of
10 the numbers is then authorized.

 The user selects and touches any numbers among numbers 0 to 9 displayed on a touch panel 1 by either the finger tip input or the finger pad input. The selected numbers are registered as input numerals (S2006). Then, the control unit
15 3 compares the contact range with the threshold value. When the contact range is equal to or smaller than the threshold value (S2007: Yes), the control unit 3 stores the input numeral in association with the finger tip input (S2008). A message as shown in Fig. 11C is displayed to inform the user that the numeral
20 has been registered by finger tip input. When the contact range is larger than the threshold value (S2007: No), the control unit 3 stores the input numeral in association with the finger pad input (S2009).

 The control unit 3 displays a message as shown in Fig.

11B to inform the user that the numeral has been registered by finger pad input. The control unit 3 then increments the counter and proceeds to the next password input (S2010). When the counter is greater than 4 (S2005: Yes), a numeric string of four
5 input numerals is registered as the password as shown in Fig. 12A. In addition, the input method of either the finger tip input or the finger pad input corresponding to the numeral is stored for each input numeral. The password registration thus terminates (S2011).

10 A method for cancelling or unlocking the password will be next described below with reference to Fig. 13 showing a flow chart of a password cancel process and Fig. 14 showing a password cancel screen.

As can be seen in Fig. 14, the control unit 3 displays
15 a password cancel screen including a ten-key pad with a plurality of numerals in order to prompt the user to input a numeral. At the same time, the control unit 3 performs initial settings such as counter reset (S3000). The control unit 3 waits until a user inputs a numeral (S3001). Upon the user touching the touch panel
20 1, the control unit 3 specifies the number according to a position of the contact. The contact range of the contact is compared with a threshold value to thereby determine whether the input is a finger tip input or a finger pad input (S3002). The control unit 3 stores the numeral input and the input method

used (S3003). When the number of the input and the password registered earlier matches, (S3004: Yes) and the input methods thereof matches as well (S3005: Yes), the control unit 3 increments the counter (S3006). When the counter is not greater
5 than 4 (S3007: No), the control unit 3 proceeds to the step for inputting the next password number. When the counter is greater than 4 (S3007: Yes), the password is authenticated (S3008) and the lock is canceled. Meanwhile, in cases where the number of input and a password do not match (S3004: No), or in cases where
10 the number of input and a password match but their input methods do not match (S3005: No), the control unit 3 displays a message to inform the password or the input method is wrong (S3009). The password cancellation thus terminates.

It is to be noted that a plurality of input methods may
15 be registered for one password. For example, in the case shown in Fig. 12B, three types of input methods are registered for one password and a specific operation is assigned for each of them: input method 1 is for displaying a normal standby screen, input method 2 is for displaying a mail creating screen, and
20 input method 3 is for starting an application. A user can start a desired operation easily by way of unlocking the password, thus contributing to improved convenience. Not to mention, a plurality of input methods may be registered for a plurality of passwords as well.

Using the above system, a user can complicate cancellation of a lock by making a simple input to enhance security. The portable terminal 0 can thus handle user's highly confidential information, which makes the terminal more useful.

5 Security can be enhanced by only storing, in addition to the password registered, the input method for each of the password numbers. An increase in storage capacity can be sufficiently suppressed.

From the view of a user, the user only needs to remember
10 the input method for each password number to unlock the portable terminal 0. Burdens on the user for memorization can thus be alleviated. It is also advantageous in that when a user has to tell others the way to unlock the portable terminal 0, the user only needs to tell the password numbers and the input method
15 for each of the password numbers.

Although the second embodiment employed a password composed of numerals only, the present invention is not limited to this. The password may be composed of alphabets, symbols, figures, patterns, colors, or other elements, or combinations
20 thereof. In addition, the number of digits of a password is not limited to four and the number may instead be one, two, or a greater numeral.

The process for password registration (Fig. 9) may be started when a predetermined condition is satisfied, such as

when the user calls up a particular function from a setting menu.

In the embodiment of the present invention, calibration is performed by a user touching a single point. However, the present invention is not limited to this. For example, the calibration performed during unlocking as described for the first embodiment may be applied. The user may also start calibration by calling up a particular function from the setting menu. Incidentally, during the password cancellation, the message informing the fact that the difference in contact ranges are detected may be not shown (hidden), and when only the numbers are correct, a message may be displayed to inform that the difference in the contact range is also registered. Numerals and input methods may also be hidden and not shown during password input. While a threshold value is used for distinguishing the finger tip input and the finger pad input in the embodiment, the present invention is not limited to this. The determination of an input method may be conducted in a manner such that records both contact ranges of the finger tip input and the finger pad input, and when a input is made, compares the input contact range with the data, whereby selecting the closer one as the method of the particular input.

The operation of distinguishing the difference in the contact range may be omitted in particular situations of input. For example, the system may be adapted so that the classification

based on a difference in contact ranges is not performed when the button switch is pressed or when more than two points are touched for multi-touch input.

WHAT IS CLAIMED IS:

1. An information processing apparatus comprising:

5 a touch panel which displays a plurality of pieces of identification information and detecting a contact of the panel with an object of interest;

a detection unit, when the touch panel detects a contact with the object, which specifies identification information indicated by a position at which the contact in question occurred,
10 of the multiple pieces of identification information displayed on the panel, and which detects an area of part where the contact occurred;

a storage unit which stores reference identification information and a reference area range;

15 a determination unit which determines whether the identification information detected by the detection unit matches the reference identification information stored in the storage unit and whether the area of the contact detected by the detection unit falls within the reference area range stored
20 in the storage unit; and

a control unit which performs particular processing on condition the determination unit determines that the identification information detected by the detection unit matches the reference identification information stored in the

storage unit and the area of the contact detected by the detection unit falls within the reference area range stored in the storage unit.

2. The information processing apparatus according to
5 claim 1, wherein:

the storage unit stores, when a predetermined condition is satisfied, the identification information and the area of the contact detected by the detection unit as the reference identification information and the reference area range,
10 respectively.

3. The information processing apparatus according to claim 1 or 2, wherein:

the storage unit stores first identification information and a first area range and second identification information
15 and a second area range as the reference identification information and the reference area ranges; and

the determination unit determines, on condition the identification information detected by the detection unit matches the first identification information stored in the
20 storage unit and the area of the contact detected by the detection unit falls within the first area range stored in the storage unit, whether the identification information detected by the detection unit matches the second identification information stored in the storage unit and the area of the

contact detected by the detecting unit falls within the second area range stored in the storing unit.

4. The information processing apparatus according to any one of claims 1 to 3, wherein:

5 the storage unit stores a threshold value; and
 the reference area range stored in the storage unit is defined based on the threshold value.

5. The information processing apparatus according to claim 4, wherein:

10 the area of the contact detected by the detection unit is registered as the threshold value when a predetermined condition is satisfied.

6. An information processing apparatus comprising:

 a touch panel which displays a plurality of pieces of
15 identification information and detecting a contact of the panel with an object of interest;

 a detection unit for, when the touch panel detects a contact of the panel with the object, which specifies identification information indicated by a position at which the
20 contact in question occurred, of the multiple pieces of identification information displayed on the touch panel, and which detects an area of part where the contact occurred;

 a storage unit which stores a series of identification information and a series of area ranges, the series of area

ranges each corresponding to the respective identification information; and

a control unit which performs particular processing on condition that a set of identification information detected by the detection unit matches the series of identification information stored in the storage unit and a series of contact areas detected by the detection unit each falls within the corresponding one of the series of area ranges stored in the storage unit.

7. The information processing apparatus according to claim 6, wherein:

the storage unit stores a first set of area ranges and a second set of area ranges as corresponding area ranges of the stored series of identification information; and

first processing is performed on condition that a set of identification information detected by the detecting unit matches the series of identification information stored in the storage unit and the areas of the contact detected by the detecting unit each falls within a corresponding one of the first set of area ranges stored in the storage unit, and second processing is performed on condition that a set of identification information detected by the detecting unit matches the series of identification information stored in the storing unit and the areas of the contact detected by the

detecting unit each falls within a corresponding one of the second set of area ranges stored in the storage unit.

ABSTRACT OF THE DISCLOSURE

An information processing apparatus according to the present invention includes: a touch panel which displays a plurality of pieces of identification information including letters, figures, and symbols and for detecting a contact of the panel with a finger of a user or other objects; a detection unit for, when the touch panel detects a contact of the panel with the object, which specifies identification information indicated by a position at which the contact in question occurred, of the multiple pieces of identification information displayed on the touch panel, and which detects an area of part where the contact occurred; a storage unit for storing reference identification information and a reference area range; and control unit for performing particular processing on condition the identification information detected by the detection unit matches the reference identification information stored in the storage unit and the area of the contact detected by the detection unit falls within the reference area range stored in the storing unit.

Information processing apparatuses including a touch panel can be improved in usability by employing such system.

FIG. 1A

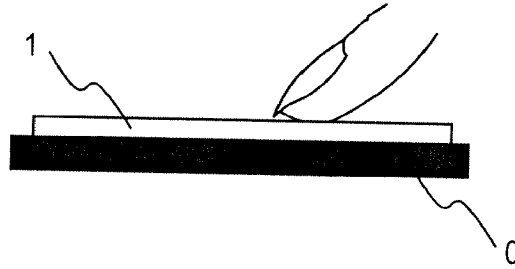


FIG. 1B

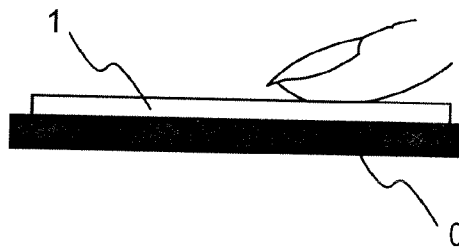


FIG. 2

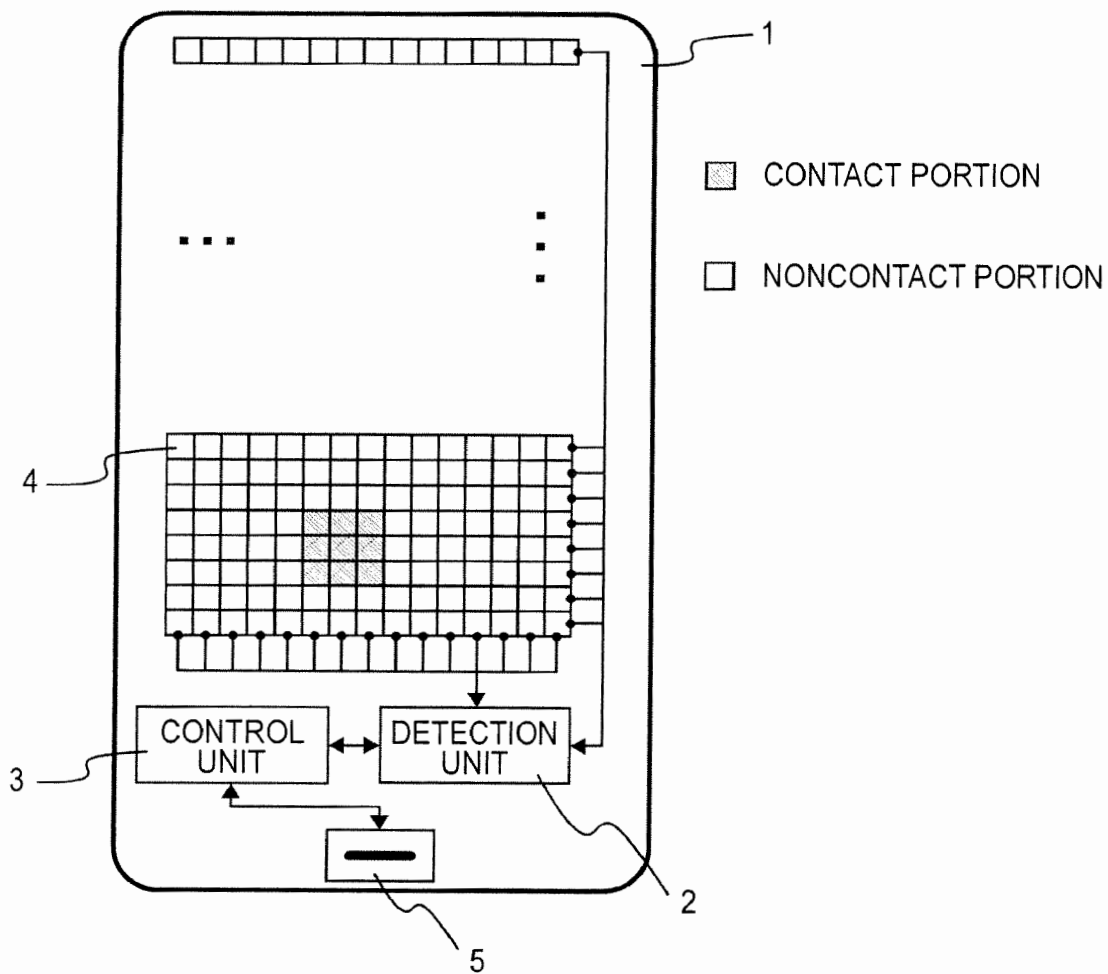


FIG. 3

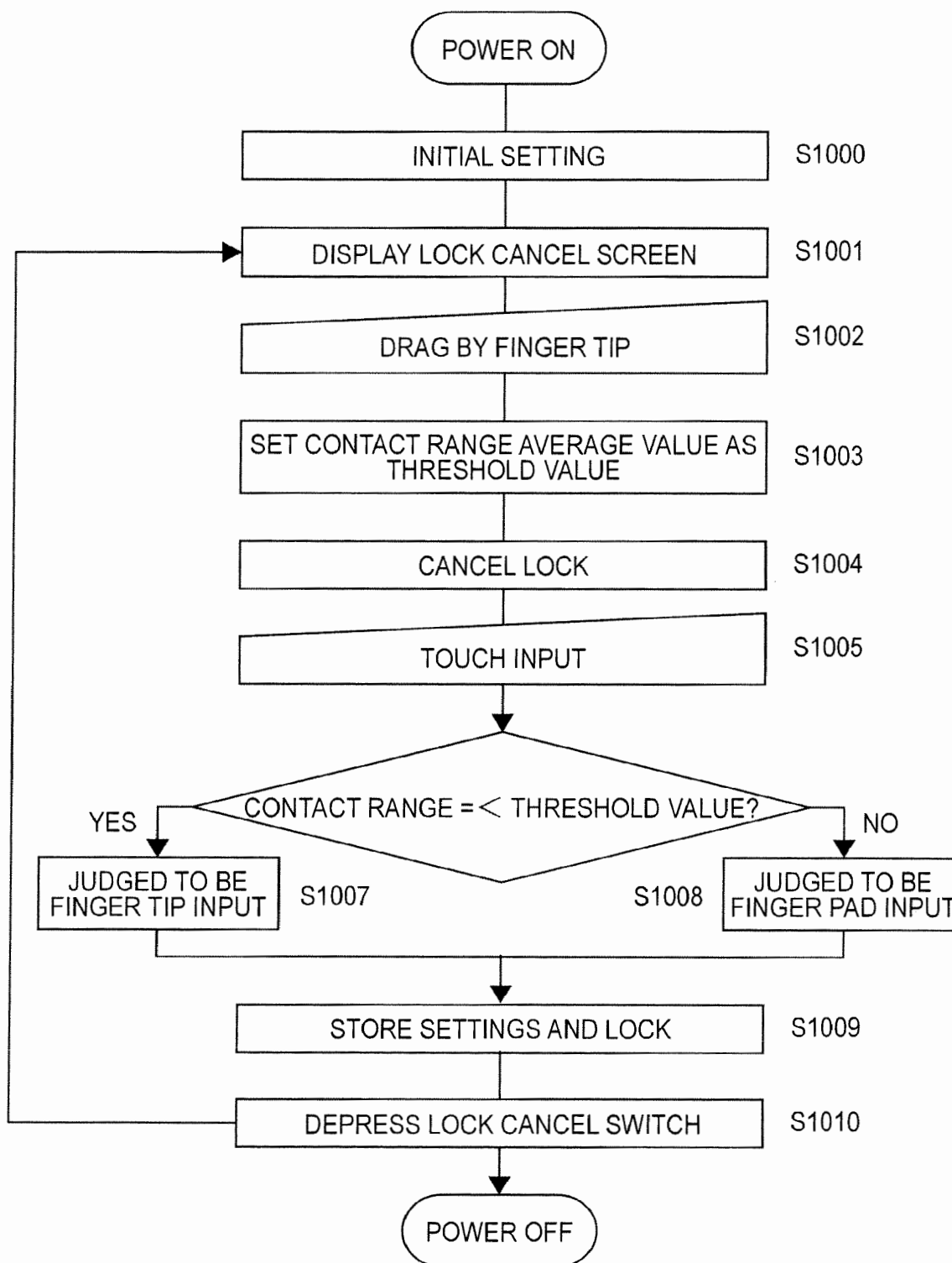


FIG. 4A

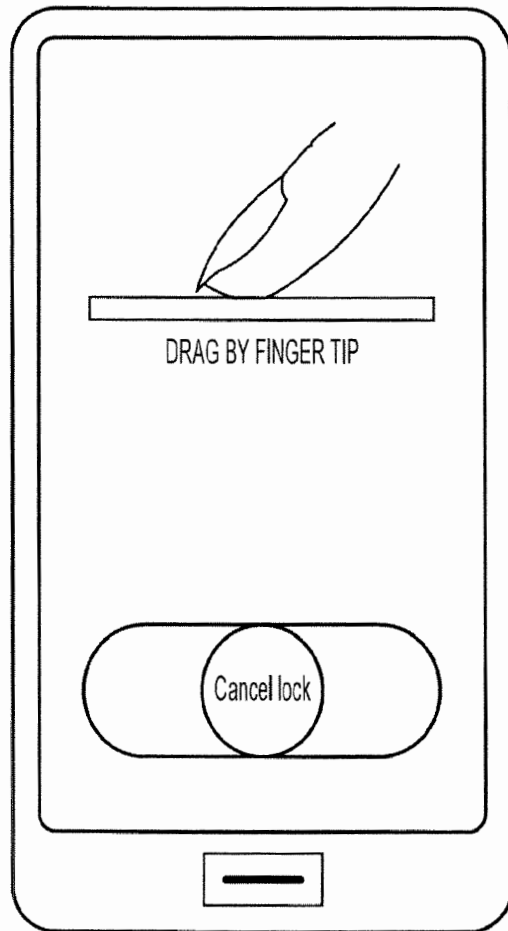


FIG. 4B

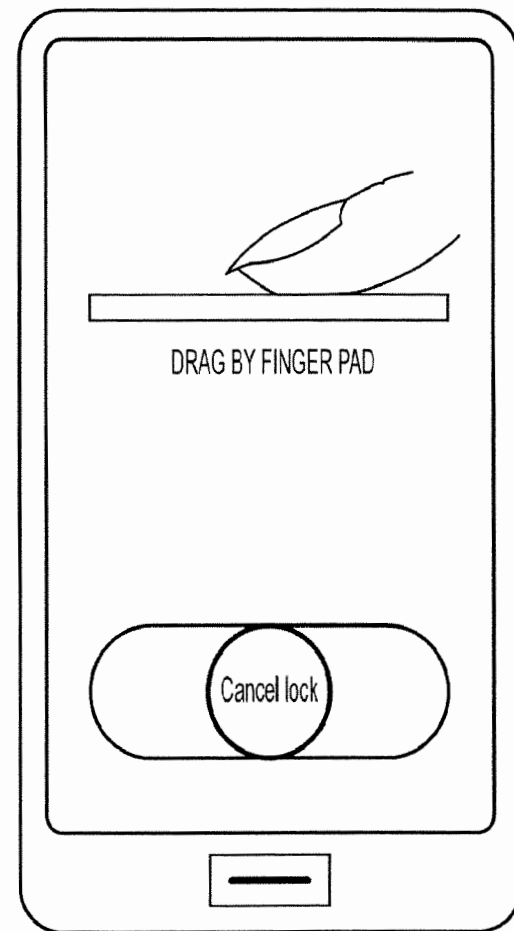


FIG. 5A

FIG. 5B

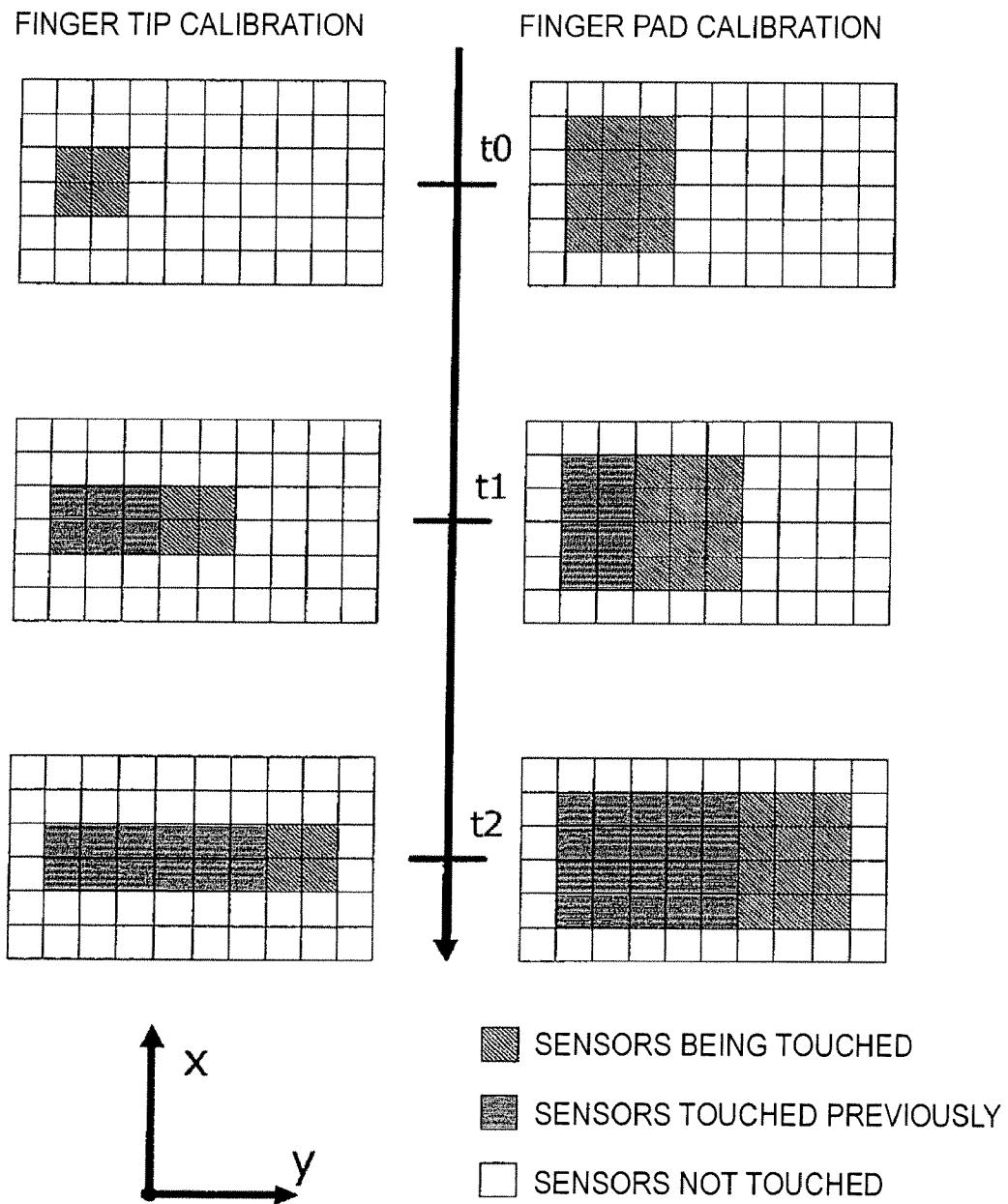


FIG. 6A

FIG. 6B

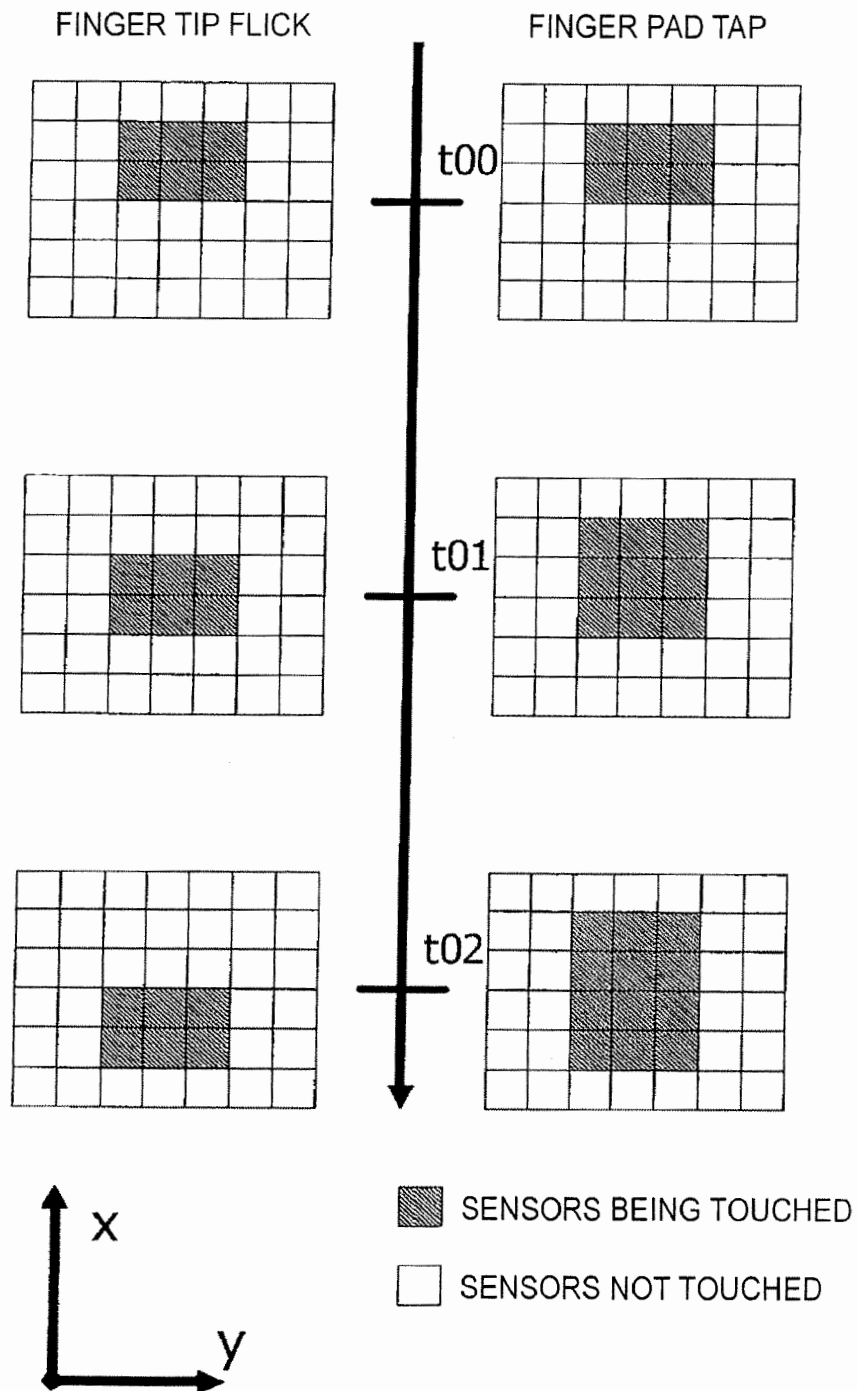


FIG. 7A

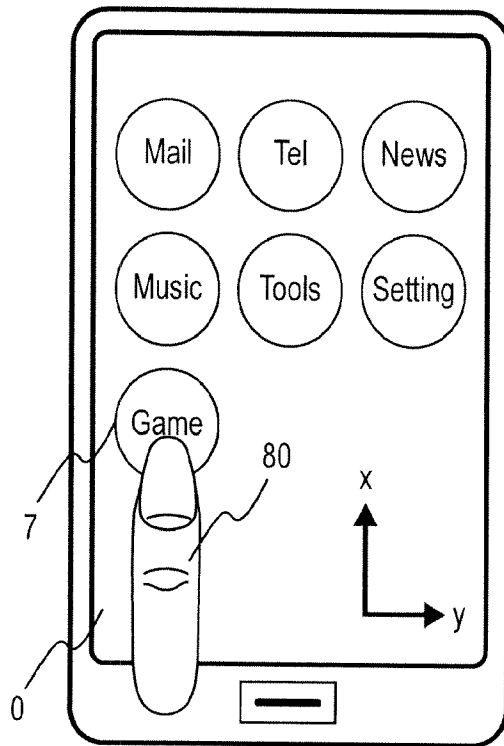


FIG. 7B

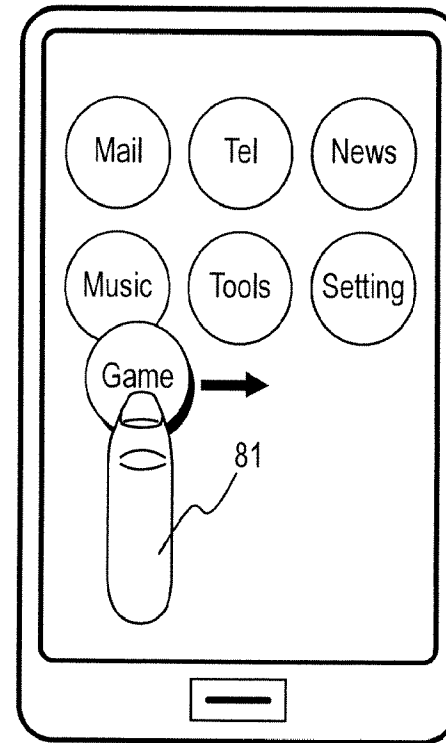


FIG. 7C

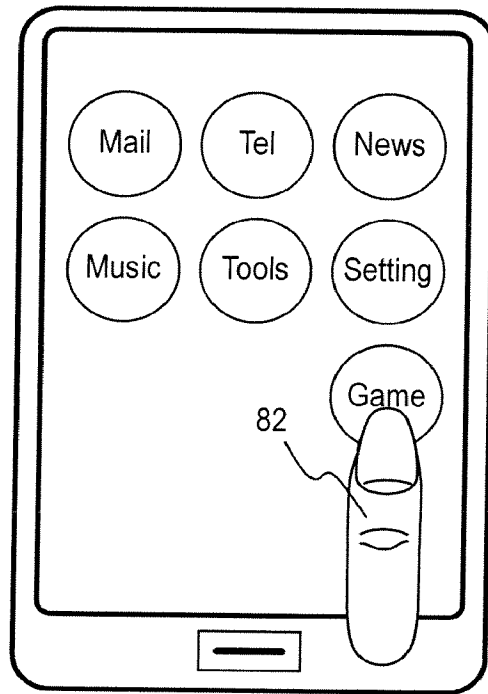


FIG. 8

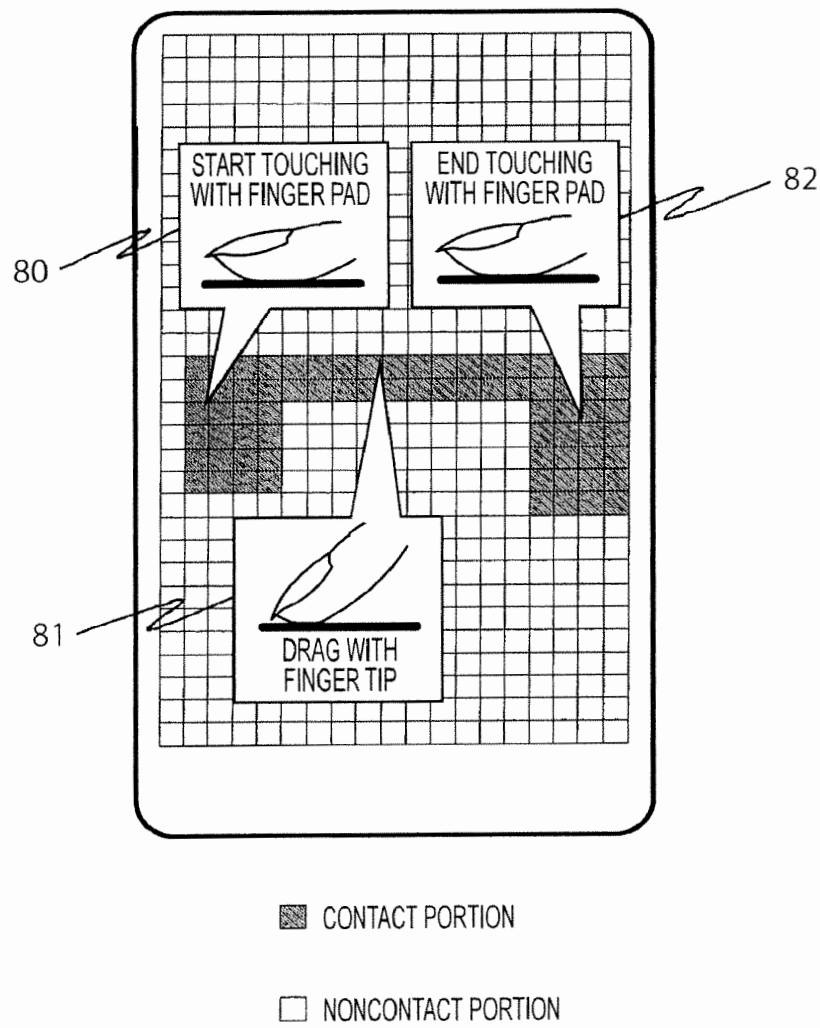


FIG. 9

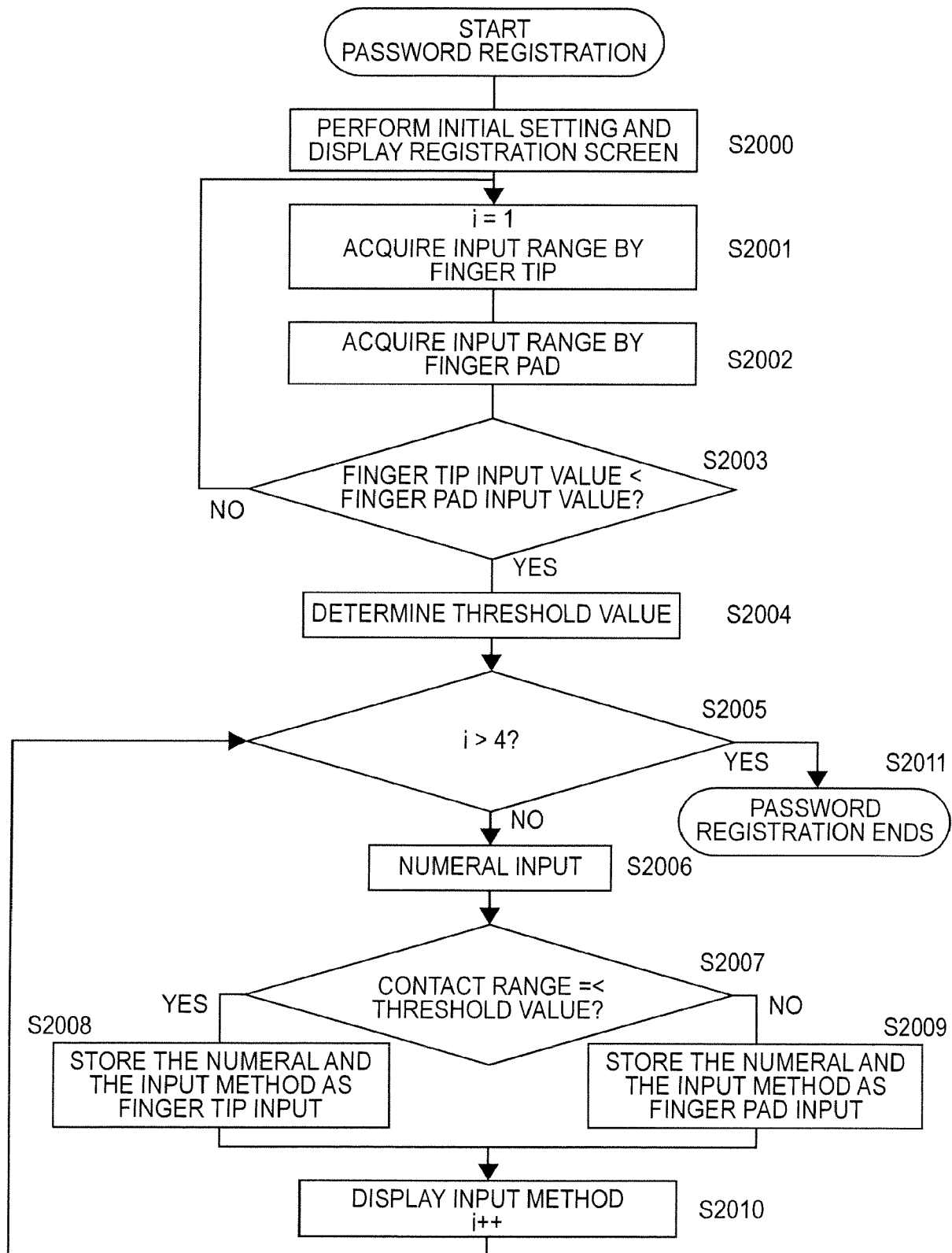


FIG. 10A

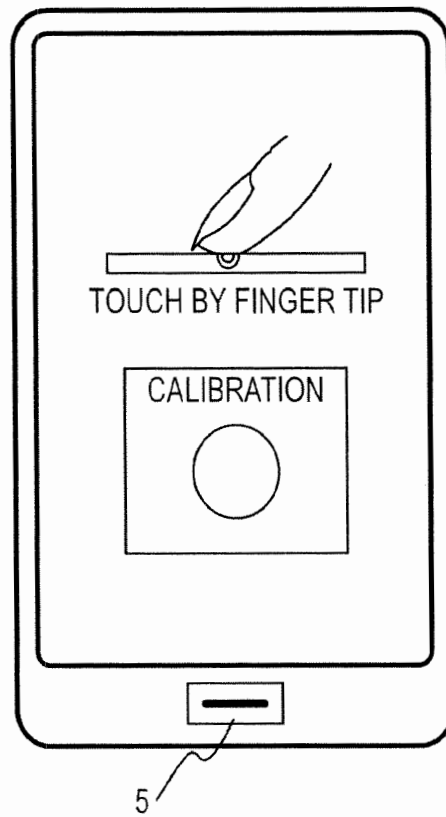


FIG. 10B

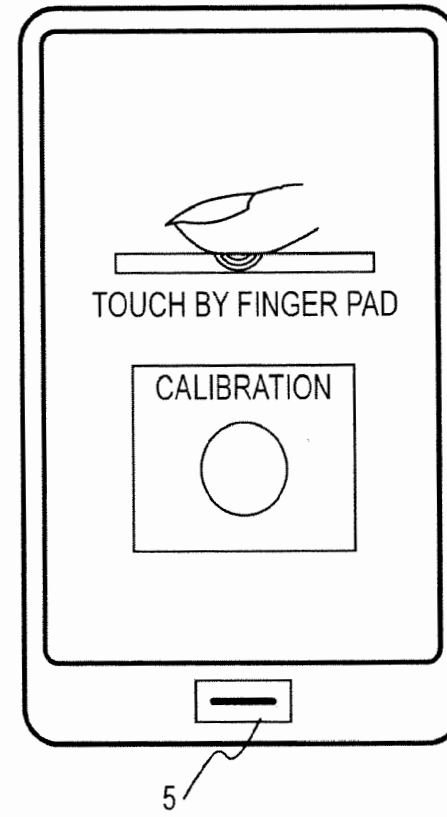


FIG. 11A

PASSWORD REGISTRATION

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INPUT BY FINGER TIP OR FINGER PAD



1	2	3
4	5	6
7	8	9
→	0	BS

FIG. 11B

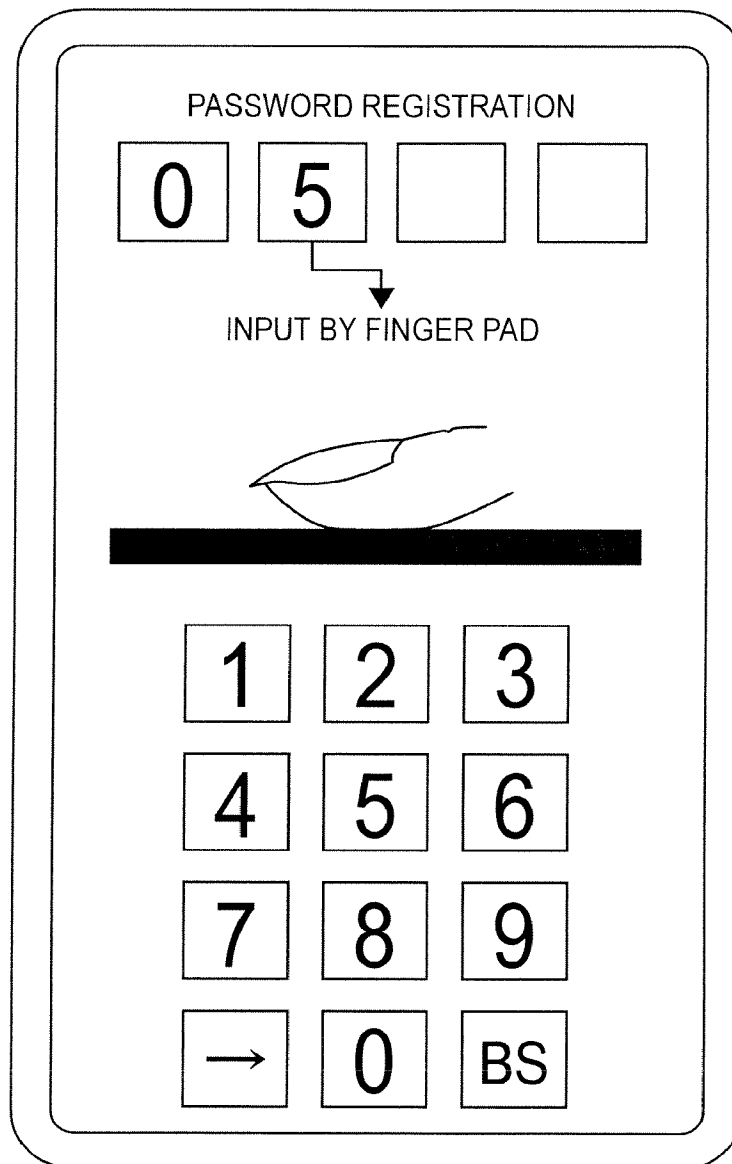


FIG. 11C

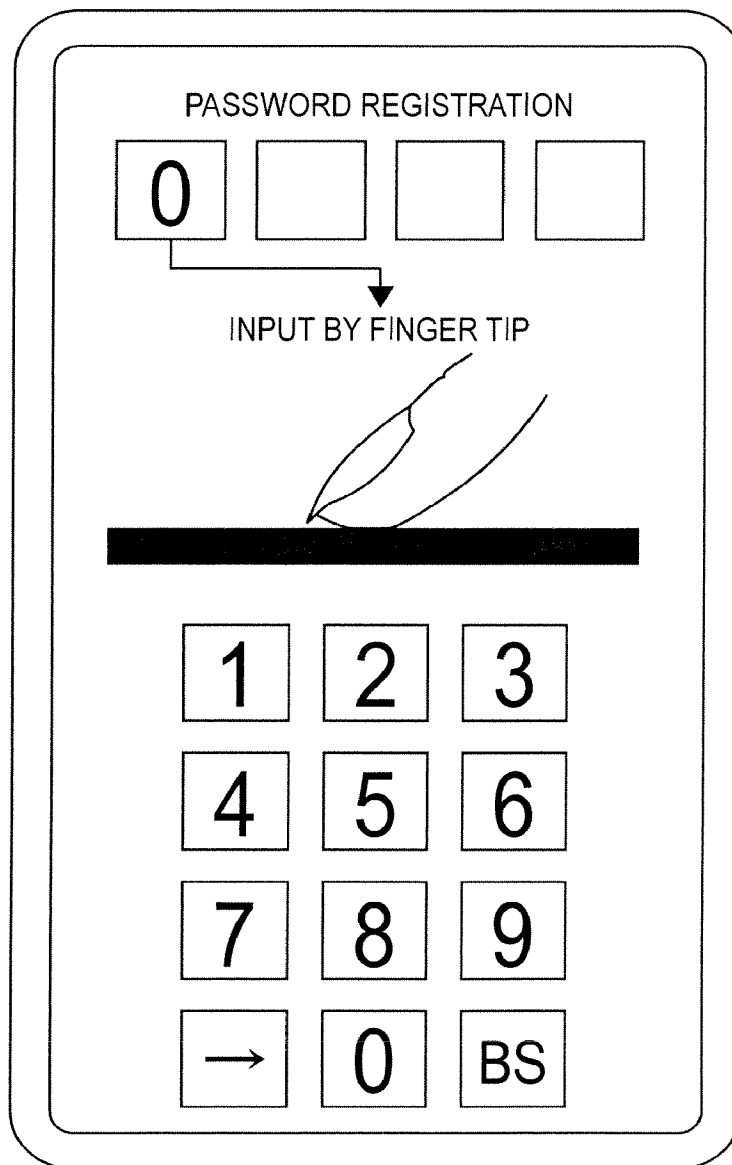


FIG. 12A

DIGIT	1	2	3	4
PASSWORD	0	5	2	8
INPUT METHOD	FINGER TIP	FINGER PAD	FINGER PAD	FINGER PAD

FIG. 12B

DIGIT		1	2	3	4	OPERATION
PASSWORD		0	5	2	8	—
INPUT METHOD	1	FINGER TIP	FINGER PAD	FINGER PAD	FINGER PAD	WAITING SCREEN
	2	FINGER TIP	FINGER TIP	FINGER TIP	FINGER TIP	MAIL CREATING SCREEN
	3	FINGER PAD	FINGER TIP	FINGER PAD	FINGER TIP	APPLICATION STARTING

FIG. 13

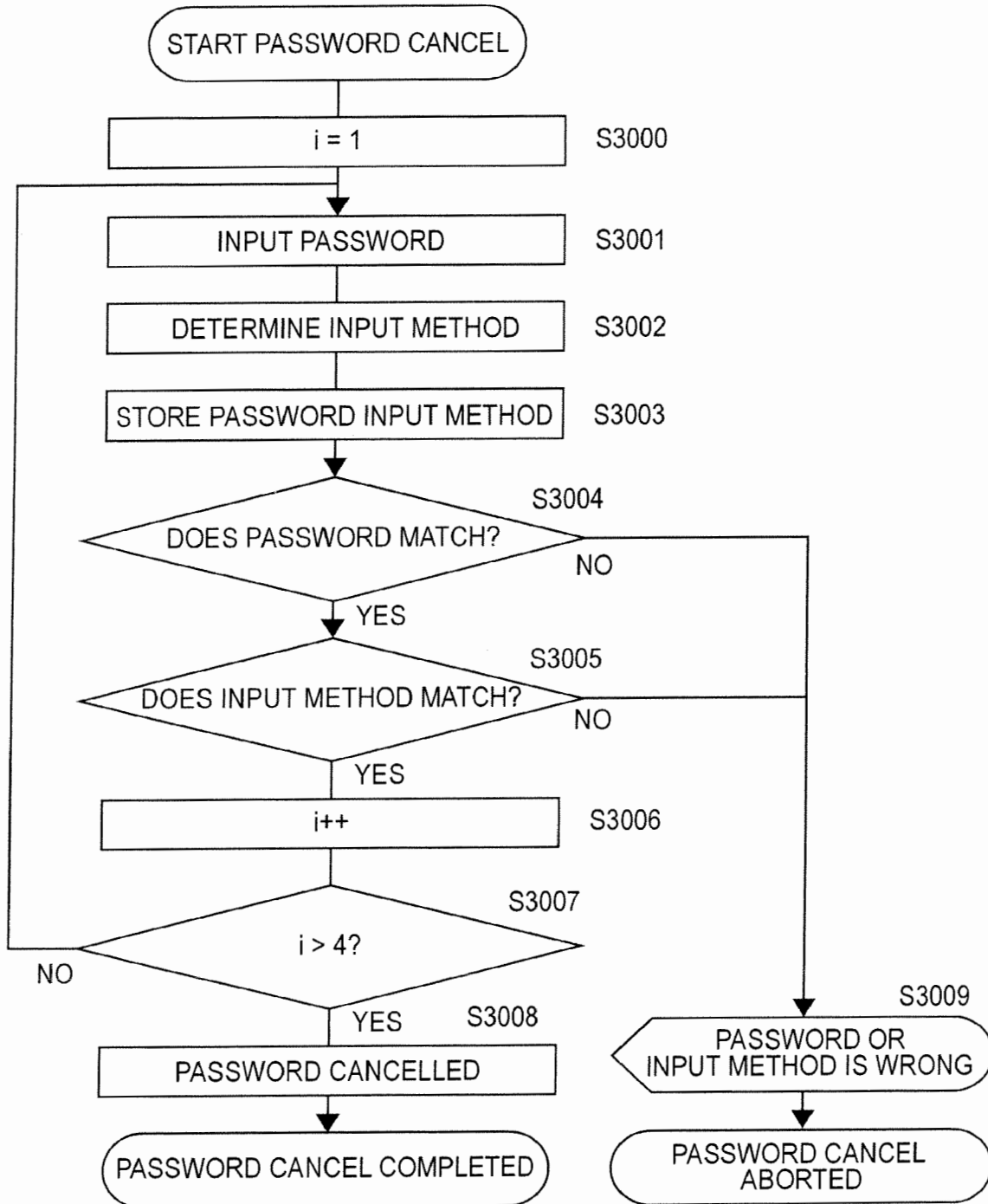


FIG. 14

