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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	2001P00413US01
		Application Number	
Title of Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR		
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.			

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Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Matthew	J.	Bickerton		
Residence Information (Select One)					
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City	Bletchingley	Country Of Residenceⁱ	GB		
Citizenship under 37 CFR 1.41(b)ⁱ	GB				
Mailing Address of Applicant:					
Address 1	High Tech Campus				
Address 2	Building 44				
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Title of the Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR		
Attorney Docket Number	2001P00413US01	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	2001P00413US01
	Application Number	
Title of Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR	

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 I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in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.

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Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	reissued of	10/156409	2002-05-28	6885318	2005-04-26

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Remove			
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
0116083.7	GB	2001-06-30	<input checked="" type="radio"/> Yes <input type="radio"/> No

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	2001P00413US01	
		Application Number		
Title of Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR			
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>				
Organization Name	KONINKLIJKE PHILIPS ELECTRONICS N.V.			
Mailing Address Information:				
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Signature	/Michael E. Belk/		Date (YYYY-MM-DD)	2013-07-25
First Name	Michael E.	Last Name	Belk	Registration Number
				33357

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US006885318B2

(12) **United States Patent**
Bickerton

(10) **Patent No.:** **US 6,885,318 B2**
(45) **Date of Patent:** **Apr. 26, 2005**

(54) **TEXT ENTRY METHOD AND DEVICE THEREFOR**

(75) **Inventor:** **Matthew J. Bickerton**, Bletchingley (GB)

(73) **Assignee:** **Koninklijke Philips Electronics N.V.**, Eindhoven (NL)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 507 days.

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(30) **Foreign Application Priority Data**

Jun. 30, 2001 (GB) 0116083

(51) **Int. Cl.**⁷ **H03K 17/94; H03M 11/00**

(52) **U.S. Cl.** **341/22; 345/168; 379/368; 400/486**

(58) **Field of Search** **341/22; 379/368, 379/906; 400/477, 486; 345/168**

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* cited by examiner

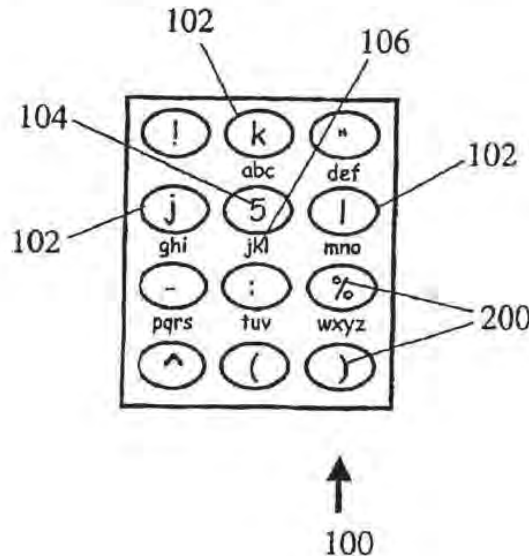
Primary Examiner—Timothy Edwards, Jr.

(74) *Attorney, Agent, or Firm*—Gregory L. Thorne

(57) **ABSTRACT**

A method and device for improved character input are described, wherein the method employs a keypad 100 comprising keys 102 able to display secondary characters 106 in addition to primary characters 104. The keypad has a default display state. A first key selection causes the keypad 100 to display secondary characters 106 associated with the first key on other keys 102, whereupon a second key selection causes the displayed character to be input, following which the keypad reverts to displaying the default state. Further secondary characters 200 may also be displayed after a first key selection. The method is particularly useful for handheld devices such as mobile radio telephones or handheld computers adapted to implement the method of the invention.

7 Claims, 6 Drawing Sheets



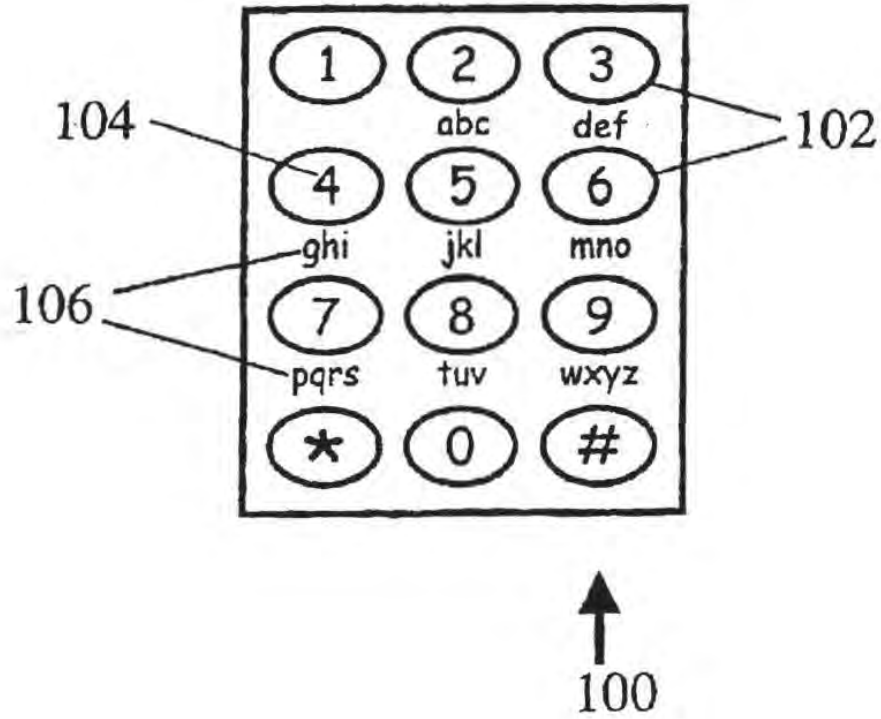


Fig. 1

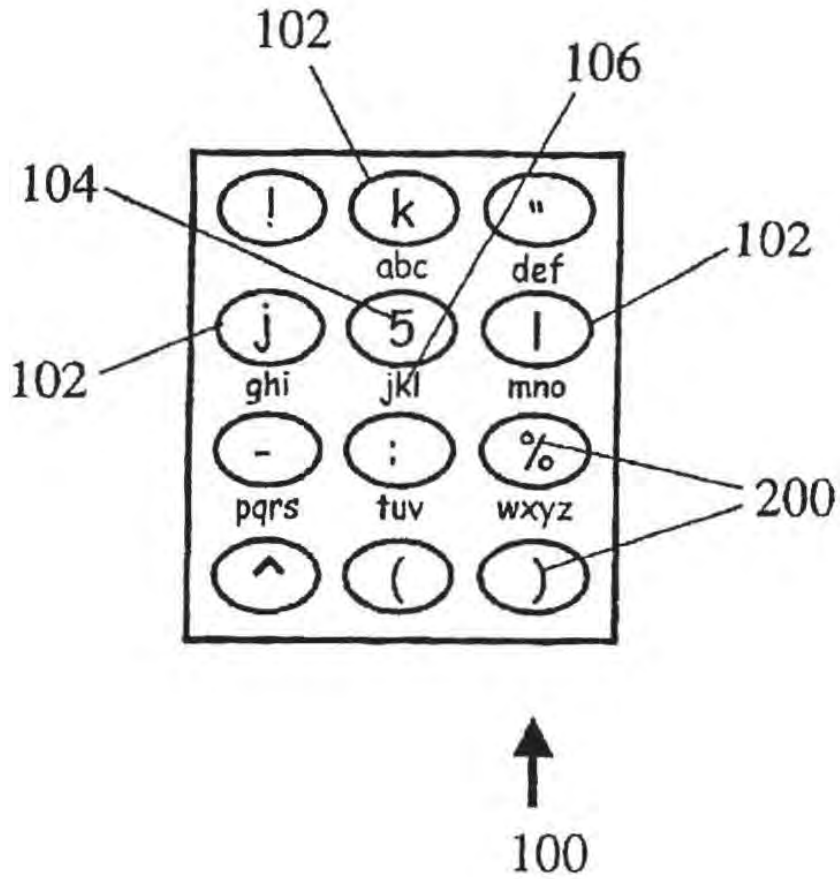


Fig. 2

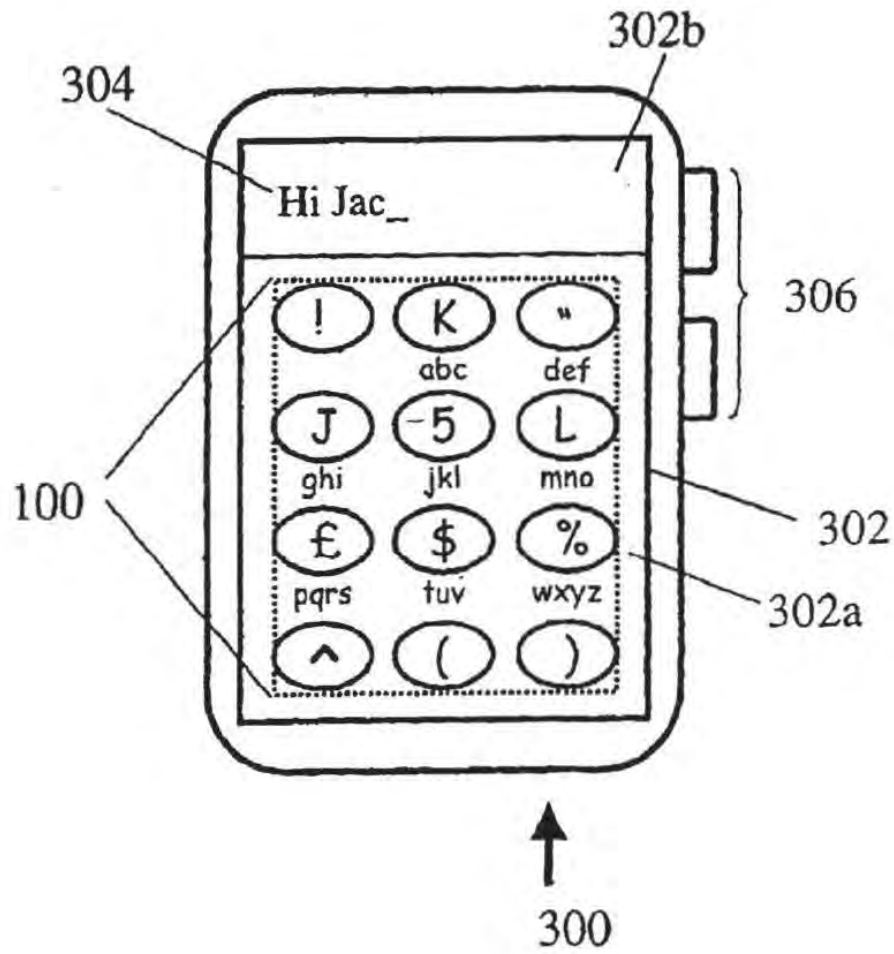


Fig. 3

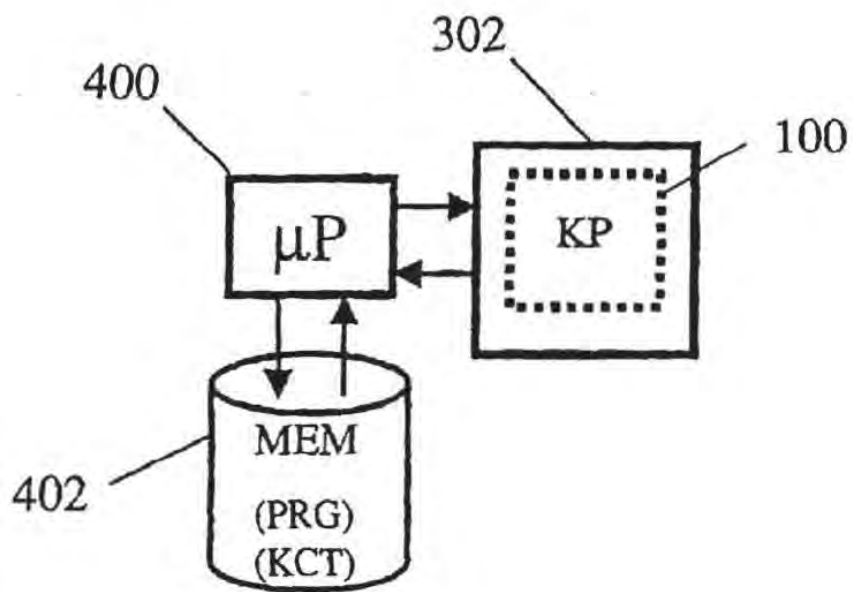


Fig. 4

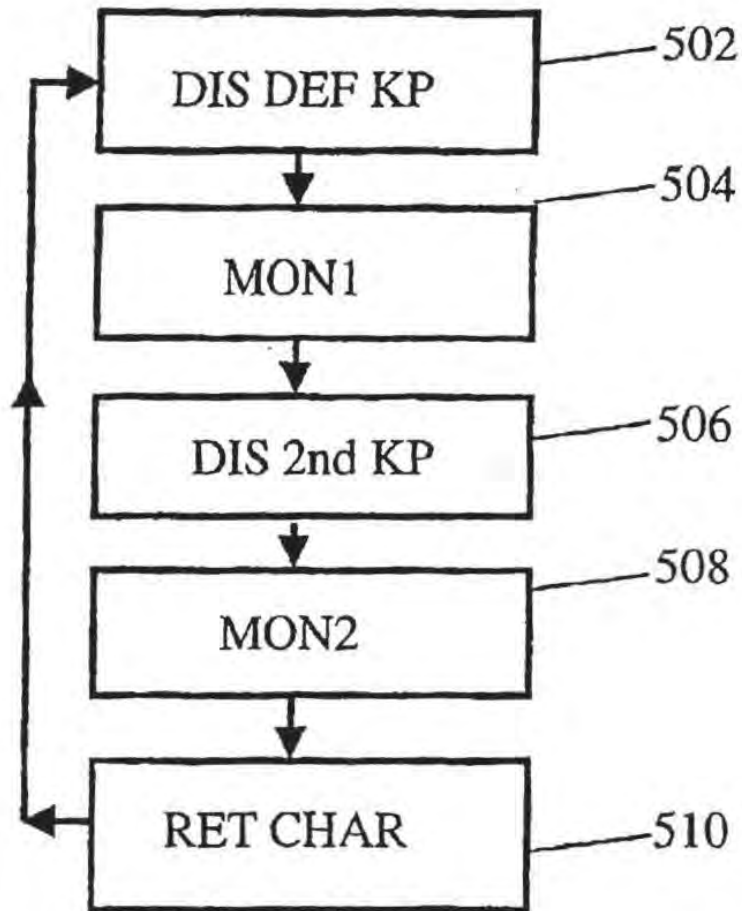


Fig. 5

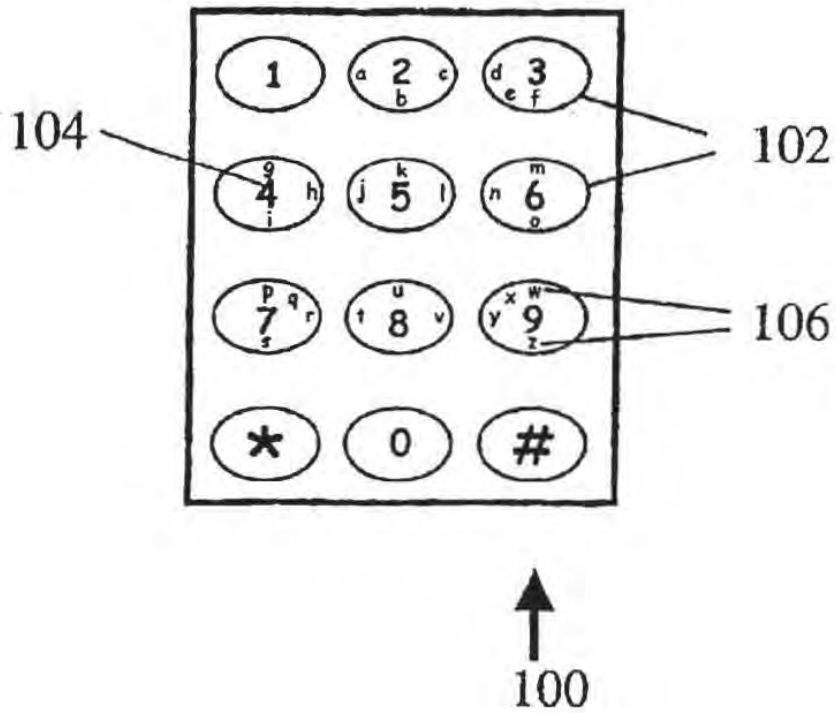


Fig. 6

**TEXT ENTRY METHOD AND DEVICE
THEREFOR**

The present invention relates to a method of entering text into a device, and to a device such as a portable radio telephone or a handheld computer suitably adapted to implement said method.

Portable radio telephone, or "mobile phone", ownership during recent years has been well documented and reported world-wide. Whilst mobile phone networks such as the Global System for Mobile communications (GSM) were originally designed for voice traffic, the sending of text messages using a Short Messaging Service (SMS) via suitably equipped phones has risen dramatically over the past couple of years, with the number of SMS messages sent world-wide on the GSM networks reaching fifteen billion in December 2000. This is in part due to the critical mass of ownership now reached in developed countries and also due to the low and typically fixed costs of sending a text message when compared with a voice call. The popularity of text messaging is also explained by the private and often intimate communication path offered by a text message. The numbers of text messages sent and received by users are forecast to increase even further with the impending introduction of more advanced, so-called 3G (third generation) wireless networks and services, where data, fax and more advanced e-mail services will be available on a 3G mobile phone or suitably equipped handheld computer or personal digital assistant (PDA).

A known method of entering text into devices such as mobile phones involves a user pressing a key on a keypad several times to cycle through characters associated with the key, until the character required is selected. For example, the number "2" key is associated with the characters "abc", the "3" key with the characters "def", the "4" key with the characters "ghi", the "5" key with "jkl" and so on. To select the character "a", the "2" key is pressed once. To select the character "b" the "2" key is pressed twice. The character "1" is selected by pressing the "5" key three times and so forth. Special characters (for example full stop, exclamation mark, double quote, dollar, percent, ampersand and star) are produced by tapping the one or zero keys several times until the required special character is selected. This method of entering text, commonly referred to as the "multitap" method is at present almost ubiquitous on mobile phones due to agreed standardisation between mobile phone manufacturers and service providers. Users are therefore very familiar with the multitap keypad layout and character association. However, this method often requires more than two key taps to select a character, and the entering of special characters can take many key taps. The method is therefore slow and prone to error.

An alternative method of inputting text to a device is disclosed in U.S. Pat. No. 5,128,672 wherein the device comprises a dynamic predictive keyboard which is graphically represented on a touch sensitive display. A user inputs a character by pressing a key with the required character displayed on it. Following a character input, software provided within the device formulates a prediction, based on statistical analysis of the make-up and composition of English words of the next most likely character required by the user and consequently the layout of the keyboard is

altered such that said most likely character is displayed on the keyboard. This has the problem that the keyboard does not resemble the multitap keypad familiar to mobile phone users, thereby presenting an unfamiliar interface to the average user. This problem is further compounded since in use the constant changing of the keyboard layout necessitates much practice and learning for proficient and quick text entry. Furthermore, the access and input of special characters is a problem unsolved by the predictive means of U.S. Pat. No. 5,128,672.

It is therefore an aim of the present invention to provide an improved method of entering characters into a device such as a mobile phone or handheld computer. It is a further aim of the present invention to provide a method consistent with a keypad with which mobile phone users are familiar.

According to a first aspect of the present invention there is provided a method for inputting a character to a device, the device comprising a keypad, the keypad comprising a plurality of keys, at least one of which keys has a primary character, a plurality of secondary characters and a display area associated with it, the keypad in a default state displaying the primary character associated with a key in its respective display area, wherein the method comprises the steps of: detecting a first key selection; displaying each of the secondary characters associated with the first selected key in a respective display area; detecting a second key selection; selecting for input the secondary character associated with the second key selection; and returning the keypad to the default state.

According to a second aspect of the present invention there is provided a device for receiving character input, comprising a keypad having a plurality of keys, a key having a primary character, a plurality of secondary characters and a display area associated with it, wherein means are provided for displaying in a default state the primary character associated with a key in its respective display area, means responsive to a first key selection are provided for displaying each of the secondary characters associated with the selected key in a respective display area, and means responsive to a second key selection are provided for selecting as input character the secondary character associated with the second key selected and for returning the keypad to its default state.

The device and method of this invention comprise a keypad having a default display state wherein primary, and optionally secondary, characters are displayed. A user inputs a character by selecting the key having that character as one of its associated secondary characters, following which the keypad displays the required character which is then input via an appropriate second key selection.

In one embodiment of the present invention the keypad is displayed on a touch screen, the touchscreen having an output area for displaying characters input by the user. In this embodiment the display area associated with a key is provided by an area of touchscreen within or adjacent to the graphical representation of the key or button.

In another embodiment of the present invention the associated display area of a key is provided by display means such as a liquid crystal display within or adjacent to the key or button. The display means are arranged such that a displayed character is visible to the user, and hence character association with the key is rendered obvious to the user.

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The method and device of this invention provide improved text entry particularly suited to, but not exclusively for, hand held devices such as portable mobile radio telephones, personal digital assistants, pocket computers and remote control handsets.

Embodiments of the present invention will now be described, by way of example only, with reference to the accompanying figures in which:

FIG. 1 depicts a default display state of a keypad for use with the present invention.

FIG. 2 illustrates an example of the characters displayed on the keypad after a first key selection.

FIG. 3 depicts an example of a device made in accordance with the present invention.

FIG. 4 is a schematic diagram of components of the device of FIG. 3.

FIG. 5 is a flow diagram illustrating a basic implementation of a method according to the present invention.

FIG. 6 depicts an alternative default display state of a keypad for use with the present invention.

In the figures the same reference numerals have been used to indicate corresponding features.

FIG. 1 depicts a keypad 100 in a default display state wherein twelve keys 102 are arranged in four rows of three keys. Each key has a primary character 104 and a plurality of secondary characters 106 associated with it. The primary character 104 displayed on each key 102 is, in this embodiment, selected from the group of characters 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, # and *. The secondary characters 106 associated with each key are shown in groups adjacent the respective key. The secondary character groupings in this embodiment are similar to those of the multitap method, for example the key associated with primary character "2" has an associated secondary character grouping "abc", the key "3" the associated secondary characters "deP" and so on as shown in the figure. Hence, the default display state of the keypad 100 as shown in FIG. 1 presents to the user a keypad having a well known key and character layout, thereby necessitating little or no familiarisation.

FIG. 2 illustrates a possible display state of the keypad 100 after a first key selection by a user, the selected key in this example being the "5" key (the key associated with the primary character "5" and secondary characters "jkl"). The secondary character "j" is displayed by the display area associated with a neighbouring key, in this example the key associated with the primary character "4" adjacent the "5" key. Similarly, the secondary characters "k" and "l", associated with the first key selection, are displayed respectively on the keys previously displaying "2" and "6" as primary characters. In this example the remaining keys have displayed upon them further characters 200 which are useful for text entry. For example characters representing an exclamation mark, a double quote, a pound, a dollar sign, left and right brackets, a percentage symbol and a caret may be displayed as shown in FIG. 2.

A second key selection from the keypad of FIG. 2 selects the character displayed on the display area associated with said second key for input. Following a character input, the keypad of FIG. 2 is returned to the default display state as shown in FIG. 1.

The key selections are typically provided by a user's finger or stylus and may comprise the user tapping a first key

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followed by the user tapping a second key. Alternatively, the user may make a second key selection by sliding or dragging said finger or stylus across the keypad from the first key to the second key and pausing on, or removing the finger or stylus from, the required second key.

The dynamic keypad states illustrated in FIG. 1 and FIG. 2 provide a method of quick and accurate character input wherein secondary characters are available with only two key selections. Additionally the method is intuitive and requires little or no learning by the user due to the provision of a familiar default keypad display state.

An embodiment of a device employing the keypad and features of this method and made in accordance with the present invention is shown in FIG. 3. The figure depicts a hand-held device 300 such as a personal digital assistant (PDA) or sometimes called a handheld computer. The device comprises a touchscreen 302 comprising touch input means arranged to detect touch input upon a surface of a display means (such as a liquid crystal or organic light emitting diode display). The touchscreen in this embodiment displays a keypad 100 to the user within a touch input region 302a of the touchscreen, whilst input characters 304 are displayed in an output region 302b of the touchscreen 302. In FIG. 3 the keypad 100 is shown in the second display state of FIG. 2, wherein a first key selection of the key "5" has occurred and the keypad awaits a second key selection to input a character. The device further comprises control buttons 306 provided to power up the device or change mode of usage for example. Additionally the handheld device may incorporate means (not shown on FIG. 3) to transmit and receive data including voice and text messaging wirelessly via a suitable network.

The device 300 further comprises components adapted for carrying out a method in accordance with the present invention, these components being schematically represented in FIG. 4. The relevant components comprise a computer program (PRG) and processing means in the form of a general purpose microprocessor 400 (μ P). The computer program is stored in computer readable storage media 402 (MEM), the PRG comprising instructions to instruct the microprocessor (μ P) 400 to carry out the steps of a method according to the present invention. It is noted herewith that although the processing means of this embodiment comprise a general purpose microprocessor, other suitable forms of processing means such as dedicated logic circuits, PICmicro® chips or application specific integrated circuits (ASIC) operating with or without a computer program could be employed in alternative embodiments.

In FIG. 4 there is also provided the touchscreen 302, the touchscreen able to display a keypad 100 (KP) and detect touch input for inputting characters. In this embodiment the display area associated with each key 102 of the keypad 100 is provided by an area of touchscreen 302 within or adjacent to the graphical representation of the key 102.

Additionally, one or more key character tables (KCT) are provided within MEM 402. A KCT provides information to the microprocessor relating to the default keypad to be displayed on the touchscreen, and also provides the primary and secondary characters which are to be displayed upon a first key selection.

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An example of a KCT is presented below (Table 1).

TABLE 1

KEY	PRIMARY CHARACTER	SECONDARY CHARACTER(S)
1	1	Not used
2	2	abc
3	3	def
4	4	ghi
5	5	jkl
6	6	mno
7	7	pqrs
8	8	tuv
9	9	wxyz
0	0	Not used
*	*	Not used
#	#	Not used

Table 1 thereby provides primary and secondary characters to the microprocessor which, under the guidance of PRG instructs the touchscreen to display these characters in the appropriate locations to build up a default keypad display state corresponding to FIG. 1 and Table 1.

Similarly a KCT relating to a first key selection of key 5 is shown below in Table 2.

TABLE 2

KEY	DISPLAY SECONDARY CHARACTER
1	l
2	k
3	*
4	j
5	5
6	l
7	£
8	\$
9	%
0	-
*	(
#)

This KCT provides the characters displayed upon a first key selection corresponding to key 5 thereby providing a second keypad display state as shown in FIG. 2.

In operation, the microprocessor 400, under the guidance of PRG looks up the default key character assignments stored in MEM 402 as a KCT (for example the KCT of Table 1) and instructs the touchscreen 302 to display the keypad 100 in a default display state. The touchscreen is sampled repeatedly until a first key selection is detected, following which the appropriate characters to be displayed are retrieved from an appropriate stored KCT (e.g. Table 2) by the microprocessor and provided to the touchscreen which updates the keypad 100 displayed. Following these operations the touchscreen is sampled repeatedly for a second key selection.

Upon detection of a second key selection the microprocessor 400 compares the key selected with the displayed KCT (Table 2 for example) and returns the input character for display in the output region 302b of the touchscreen 302. Finally, the microprocessor instructs the touchscreen to display the default keypad and awaits further user interaction.

A flow diagram illustrating the main steps of this method is presented in FIG. 5, the method being performed as a loop, wherein:

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A default keypad is displayed (DIS DEF KP) 502
The keypad is monitored for a first key selection (MON1) 504

Following a first key selection the appropriate characters are displayed on the keypad (DIS 2nd KP) 506
The keypad is monitored for a second key selection (MON2) 508

Following a second key selection the secondary character associated with the second key selection is returned as an input character (RET CHAR) 510

Loop back to display the default keypad (DIS DEF KP) 502

In a further embodiment, the first key selection is reported only after the key is selected by a user for a pre-determined time period, for example a time period of 0.2 seconds. This enables quick tapping to select the default primary characters displayed on a default keypad, thereby allowing fast number entry when required without altering the keypad display state.

According to a further embodiment of this invention, the display of primary or secondary characters associated with a key is achieved by providing an associated display area within, on or situated adjacent to the key. The default assigned secondary characters are provided adjacent to the keys on the keypad, and the user presses the keys to input characters in accordance with a method of this invention.

In a further embodiment of this invention, the default display state of the keypad comprises positioning some of the secondary characters associated with a key such that the key display area upon which a secondary character will be displayed next is indicated to the user. An example of a keypad default display state according to this embodiment is given in FIG. 6 wherein secondary characters are displayed within a key, each secondary character being positioned relative to the key upon which it will appear following a first key selection. For example, the key displaying the primary character "5" has the secondary characters "j", "k" and "l" positioned to the left, above and right of the "5" respectively. Hence a visual indication of the key upon which each character will appear should the "5" be first selected is provided to the user. In this example the default display state provides an indication that the "j" will appear on the "4" key to the left of the "5" key, as is shown in the example of the keypad in FIG. 2.

In yet a further embodiment of this invention, one or more of the key character tables are alterable, thereby providing a user with the option of customising the keypad to his or her preference.

Whilst the embodiments described hereinbefore apply this invention to handheld devices such as PDAs and mobile phones, it will be apparent to those skilled in the art that the teaching of this invention may also be applied to advantage to devices wherever character input is required, such as remote control handsets or children's learning aids and toys.

Additionally, the characters assigned as primary and or secondary characters may be any characters convenient for the device, language and application chosen, and the keypad may comprise more or less keys displaying more or less characters than those illustrated herein without departing from the spirit and scope of this invention.

What is claimed is:

1. A method for inputting a character to a device, the device comprising a keypad, the keypad comprising a plu-

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rality of keys, at least one of which keys has a primary character, a plurality of secondary characters and a display area associated with it, the keypad in a default state displaying the primary character associated with a key in its respective display area, wherein the method comprises the steps of:

- detecting a first key selection;
- displaying each of the secondary characters associated with the first selected key in a respective display area;
- detecting a second key selection;
- selecting for input the secondary character associated with the second key selection; and
- returning the keypad to the default state.

2. A method according to claim 1, wherein the keypad in a default state further displays associated secondary characters adjacent the primary character, the location of each secondary character providing an indication of which display area will display that secondary character following a first key selection.

3. A computer program product stored on a computer readable medium for performing all of the steps of claim 1 when the program is run on a device for receiving character input.

4. A device for receiving character input, comprising a keypad having a plurality of keys, at least one of which keys

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has a primary character, a plurality of secondary characters and a display area associated with it, wherein means are provided for displaying in a default state the primary character associated with a key in its respective display area, means responsive to a first key selection are provided for displaying each of the secondary characters associated with the selected key in a respective display area, and means responsive to a second key selection are provided for selecting as input character the secondary character associated with the second key selection and for returning the keypad to its default state.

5. A device as claimed in claim 4, further comprising a touchscreen on which the keypad is displayed and wherein the display area associated with a key comprises a respective portion of the touchscreen.

6. A device as claimed in claim 4, wherein the display area associated with a key is provided by display means within the key.

7. A device as claimed in claim 4, wherein the display area associated with a key is provided by display means adjacent the key.

* * * * *

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Koninklijke Philips Electronics N.V.

Application No./Patent No.: US 6,885,318 Filed/Issue Date: April 26, 2005

Titled: TEXT ENTRY METHOD AND DEVICE THEREFOR

Koninklijke Philips Electronics N.V., a Corporation

(Name of Assignee)

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

states that it is:

1. the assignee of the entire right, title, and interest in;
 2. an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
 3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)
- the patent application/patent identified above, by virtue of either:

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 012954, Frame 0107, or for which a copy therefore is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. 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.

2. 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.

3. 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(b)(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.

/Michael E. Marion/

Signature

July 31, 2013

Date

Michael E. Marion

Printed or Typed Name

Authorized Signatory

Title

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.

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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875		Application or Docket Number 13/955,345	Filing Date 07/31/2013	<input type="checkbox"/> To be Mailed
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO				
APPLICATION AS FILED – PART I				
(Column 1)		(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 = *	+	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *	+	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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	07/31/2013	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	* 16	Minus ** 20	= 0
	Independent (37 CFR 1.16(h))	* 3	Minus *** 3	= 0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))			
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))			
			RATE (\$)	ADDITIONAL FEE (\$)
			X \$80 =	0
			X \$420 =	0
			TOTAL ADD'L FEE	0
(Column 1)		(Column 2)	(Column 3)	
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)
	Total (37 CFR 1.16(i))	* Minus **	=	X \$ =
	Independent (37 CFR 1.16(h))	* Minus ***	=	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))			
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))			
			TOTAL ADD'L FEE	
			LIE	/ANNETTE COWAN/

* 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.
 This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/955,345	07/31/2013	2681	3040	2001P00413US01	16	3

CONFIRMATION NO. 6652

FILING RECEIPT



24737
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

Date Mailed: 09/03/2013

Receipt is acknowledged of this reissue 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)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Applicant(s)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Assignment For Published Patent Application

KONINKLIJKE PHILIPS ELECTRONICS N.V., EINDHOVEN, NL

Power of Attorney: The patent practitioners associated with Customer Number 24737

Domestic Priority data as claimed by applicant

This application is a REI of 10/156,409 05/28/2002 PAT 6885318

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.)

UNITED KINGDOM 0116083.7 06/30/2001 No Access Code Provided

If Required, Foreign Filing License Granted: 08/30/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/955,345**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

TEXT ENTRY METHOD AND DEVICE THEREFOR

Preliminary Class

341

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).

**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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.

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NOT GRANTED

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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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 U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/955,345		
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 <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	280	
SEARCH FEE <small>(37 CFR 1.16(k), (j), or (m))</small>	N/A	N/A	N/A			N/A	600	
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	2160	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	16	minus 20 =			OR	x 80 =	0.00	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	3	minus 3 =			OR	x 420 =	0.00	
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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 <small>(37 CFR 1.16(j))</small>							0.00	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	3040	
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 <small>(37 CFR 1.16(i))</small>	*	Minus **	**	x	-	OR	x	-
Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	**	x	-	OR	x	-
Application Size Fee <small>(37 CFR 1.16(s))</small>						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total <small>(37 CFR 1.16(i))</small>	*	Minus **	**	x	-	OR	x	-
Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	**	x	-	OR	x	-
Application Size Fee <small>(37 CFR 1.16(s))</small>						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>								



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/955,345	07/31/2013	Matthew J. Bickerton	2001P00413US01

CONFIRMATION NO. 6652

24737
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

FORMALITIES LETTER



Date Mailed: 09/03/2013

NOTICE TO FILE MISSING PARTS OF REISSUE APPLICATION

Filing Date Granted

An application number and filing date have been accorded to this reissue application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration.

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 (and 37 CFR 1.175) executed by or with respect to each inventor is required. For a reissue application, the inventor's oath or declaration must be submitted prior to examination and cannot be postponed. See 37 CFR 1.175(e). An assignee of the entire interest can execute the oath or declaration if: (1) the application does not seek to enlarge the scope of the claims of the original patent; or (2) the application for the original patent was filed under 37 CFR 1.46 by the assignee of the entire interest. A substitute statement under 37 CFR 1.64 in lieu of an oath or declaration may be submitted in the circumstances provided for in 35 U.S.C. 115(d) and 37 CFR 1.64.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of the basic filing fee, search fee, examination fee or inventor's oath or declaration) as set forth in 37 CFR 1.16(f) of \$ 140 for an undiscounted entity, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is \$ 140 for an undiscounted entity

- \$ 140 Surcharge.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
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/klnelson/

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	Atty. Docket No.
Matthew J. Bickerton	2011P00413US01
Serial No.: 13/955,345	Confirmation No. 6652
Filed: 07/31/2013	Customer No. 24737
Title: TEXT ENTRY METHOD AND DEVICE THEREFOR	

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

RESPONSE TO NOTICE TO FILE MISSING
PARTS OF REISSUE APPLICATION

Sir:

In response to the NOTICE TO FILE MISSING PARTS OF REISSUE APPLICATION mailed on September 3, 2013, enclosed is a Declaration, properly signed by the Assignee and referring to the above case by its Serial Number and filing date, in compliance with 37 CFR 1.1369a). Accordingly, the above-identified patent application is now complete.

Please charge Deposit Account No. 14-1270 in the amount of \$140.00 for the surcharge for filing the Declaration on a date later than the filing date of the application, as set forth in 37 CFR 1.16(f).

Respectfully submitted,

By /Michael E. Belk/
Michael E. Belk, #33,357
Attorney
(914) 333-9643

REISSUE APPLICATION DECLARATION BY THE ASSIGNEE		Docket Number (optional) 2001P00413US01	
I hereby declare that: The residence and mailing address of the inventor or joint inventors are stated below. I am authorized to act on behalf of the following assignee: <u>Koninklijke Philips Electronics N.V.</u> The entire title to the patent identified below is vested in said assignee.			
Inventor <u>Matthew J. Bickerton</u>			
Residence: City <u>Bletchingley</u>	State	Country <u>GB</u>	
Mailing Address <u>Tye Copse Cottage</u>			
City <u>Bletchingley</u>	State	Zip <u>RH14NE</u>	Country <u>GB</u>
<input type="checkbox"/> Additional Inventors are named on separately numbered sheets attached hereto.			
Patent Number <u>6,885,318</u>		Date of Patent Issued <u>April 26, 2005</u>	
I believe said inventor(s) to be the original inventor or original joint inventors of the subject matter which is described and claimed in said patent, for which a reissue patent is sought on the invention titled: <u>TEXT ENTRY METHOD AND DEVICE THEREFOR</u> the specification of which <input type="checkbox"/> is attached hereto. <input checked="" type="checkbox"/> was filed on <u>07/31/2013</u> as reissue application number <u>13/955,343</u> . The above-identified application was made or authorized to be made by me. 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. I believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.) <input type="checkbox"/> by reason of a defective specification or drawing. <input checked="" type="checkbox"/> by reason of the patentee claiming more or less than he had the right to claim in the patent. <input type="checkbox"/> by reason of other errors.			

[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. 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 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.

REISSUE APPLICATION DECLARATION BY THE ASSIGNEE		Docket Number (Optional) 2001P00413U	
At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, a claim that the application seeks to broaden must be identified and the box below must be checked:			
The error in the patent is caused by the patentee claiming more than he had a right to claim in the patent. (continued on attached sheet)			
[Attach additional sheets, if needed.]			
<input checked="" type="checkbox"/> The application for the original patent was filed under 37 CFR 1.46 by the assignee of the entire interest.			
I hereby appoint:			
<input checked="" type="checkbox"/> Practitioners associated with Customer Number:		24737	
OR			
<input type="checkbox"/> Practitioner(s) named below:			
Name		Registration Number	
as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.			
Correspondence Address: Direct all communications about the application to:			
<input checked="" type="checkbox"/> The address associated with Customer Number:		24737	
OR			
<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone		Email	
WARNING:			
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Signature /Michael E. Marion/		Date (Optional) September 4, 2013	
Full name of person signing (given name, family name) Michael E. Marion			
Address of Assignee P.O. Box 3001, Briarcliff Manor, NY 10510			

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.

ADDITIONAL STATEMENT OF ERROR UPON WHICH REISSUE IS BASED

The patentee believes the original patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more than the patentee had the right to claim in the patent. Specifically, the error in the patent is caused by the omission of a narrower claim from the patent that renders the patent partly inoperative by failing to protect the disclosed invention to the full extent allowed by law.

The Patentee respectfully asserts that the error is corrected by an amendment that adds at least one dependent claim, for example claim 8, which protects the disclosed invention in accordance with the specification of the Patent, thus improving on the state of the art. Previously the patentee had neglected, without deceptive intent, to protect this disclosed invention in accordance with the specification of the Patent.

No new matter is added by this amendment in this reissue application. All errors in the patent being corrected in the present reissue application up to the time of filing this oath/declaration, that are not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the patentee.

Electronic Patent Application Fee Transmittal

Application Number:	13955345			
Filing Date:	31-Jul-2013			
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR			
First Named Inventor/Applicant Name:	Matthew J. Bickerton			
Filer:	Michael E. Belk/Elissa DeLuccy			
Attorney Docket Number:	2001P00413US01			
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:				
Late Filing Fee for Oath or Declaration	1051	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				140

Electronic Acknowledgement Receipt

EFS ID:	16755150
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Michael E. Belk/Elissa DeLuccy
Filer Authorized By:	Michael E. Belk
Attorney Docket Number:	2001P00413US01
Receipt Date:	04-SEP-2013
Filing Date:	31-JUL-2013
Time Stamp:	08:19:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$140
RAM confirmation Number	8684
Deposit Account	141270
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Response to Pre-Exam Sequence Notice	2001P00413US01_Response_M P.pdf	34115 27b442a4dc56a40207f1db8d3651b83ac4 7fc1d	no	1
Warnings:					
Information:					
2	Reissue dec filed in accordance with MPEP 1414	2001P00413US01_New_Declar ation.pdf	401823 e13778482c2ec1b150d62f34d2c0602edf 6e272	no	4
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30121 6a2eddc4132045e54db24162c1b353896e 15604	no	2
Warnings:					
Information:					
Total Files Size (in bytes):				466059	
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					

PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number
13/955,345

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	2160
TOTAL CLAIMS (37 CFR 1.16(i))		16	minus 20 = *			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))		3	minus 3 = *			OR	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
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL			TOTAL	3040

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))								
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))								
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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APPLICATION NUMBER	FILING or 371(c) DATE	GRP PART UNIT	FIL FEE REC'D	ATTY DOCKET NO	TOT CLAIMS	IND CLAIMS
13/955,345	07/31/2013	2681	3180	2001P00413US01	16	3

CONFIRMATION NO. 6652

UPDATED FILING RECEIPT

24737
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510



Date Mailed: 01/08/2014

Receipt is acknowledged of this reissue 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)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Applicant(s)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Assignment For Published Patent Application

KONINKLIJKE PHILIPS ELECTRONICS N.V., EINDHOVEN, NL

Power of Attorney: The patent practitioners associated with Customer Number 24737

Domestic Priority data as claimed by applicant

This application is a REI of 10/156,409 05/28/2002 PAT 6885318

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.)

UNITED KINGDOM 0116083.7 06/30/2001 No Access Code Provided

If Required, Foreign Filing License Granted: 08/30/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/955,345**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

TEXT ENTRY METHOD AND DEVICE THEREFOR

Preliminary Class

341

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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FOCUS™ Terms patno=6885318

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 Using Semantic ConceptsWhat's this?  [Advanced...](#)[View Tutorial](#)Source: [Command Searching > Utility, Design and Plant Patents](#) Terms: **patno=6885318** ([Suggest Terms for My Search](#))

156409 (10) 6885318 April 26, 2005

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6885318[Get Drawing Sheet 1 of 6](#)[Access PDF of Official Patent *](#)[Order Patent File History / Wrapper from REEDFAX®](#)[Link to Claims Section](#)

April 26, 2005

Text entry method and device therefor

INVENTOR: Bickerton, Matthew J. - Bletchingley, United Kingdom of Great Britain and Northern Ireland (GB), United Kingdom of Great Britain and Northern Ireland ()**APPL-NO:** 156409 (10)**FILED-DATE:** May 28, 2002**GRANTED-DATE:** April 26, 2005**PRIORITY:** June 30, 2001 - 0116083, United Kingdom of Great Britain and Northern Ireland (GB)**ASSIGNEE-PRE-ISSUE:**

May 28, 2002 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., KONINKLIJKE PHILIPS ELECTRONICS N.V. NL-5621 BA EINDHOVEN, Reel and Frame Number: 012954/0107

May 28, 2002 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., KONINKLIJKE PHILIPS ELECTRONICS N.V. GROENEWOUDSEWEG 1NL-5621 BA EINDHOVEN, (1), Reel and Frame Number: 012954/0107

ASSIGNEE-AT-ISSUE:

Koninklijke Philips Electronics N.V., Eindhoven, Kingdom of the Netherlands (NL), Foreign company or corporation (03)

LEGAL-REP: Thorne, Gregory L.**PUB-TYPE:** April 26, 2005 - Patent with a pre-grant publication (B2)**PUB-COUNTRY:** United States of America (US)**LEGAL-STATUS:**

May 28, 2002 - ASSIGNMENT

July 9, 2008 - FEE PAYMENT

https://www.lexis.com/research/retrieve?_m=be5d357e6f57cac54c801e8791b73653&csvc=bl&cform=se... 1/15/2014

October 19, 2012 - FEE PAYMENT
July 9, 2008 - Payment of Maintenance Fee, 4th Year, Large Entity.
October 19, 2012 - Payment of Maintenance Fee, 8th Year, Large Entity.

FILING-LANG: English (EN) (ENG)

PUB-LANG: English (EN) (ENG)

REL-DATA:

Prior Publication 20030025616, February 6, 2003, Patent Application Publication (A1)

US-MAIN-CL: 341#22

US-ADDL-CL: 345#168, 379#368, 400#486

CL: 341, 345, 379, 400

SEARCH-FLD: 341#22, 379#368, 379#906, 400#477, 400#486, 345#168

IPC-MAIN-CL: [7] H03K 017#94

IPC-MAIN-CL: [8] G06F 003#02 (20060101) Advanced Inventive 20051220 (A F I R M JP)

IPC-ADDL-CL: [7] H03M 011#00

IPC-ADDL-CL: [8] G06F 003#23 (20060101) Advanced Inventive 20051008 (A I R M EP)

IPC-ADDL-CL: [8] G06F 003#33 (20060101) Advanced Inventive 20051008 (A I R M EP)

IPC-ADDL-CL: [8] G06F 003#48 (20060101) Advanced Inventive 20070721 (A I R M EP)

IPC-ADDL-CL: [8] H03M 011#04 (20060101) Advanced Inventive 20051220 (A L I R M JP)

IPC-ADDL-CL: [8] H04M 001#23 (20060101) Advanced Inventive 20051220 (A L I R M JP)

IPC-ADDL-CL: [8] H04M 001#725 (20060101) Advanced Inventive 20051220 (A L I R M JP)

IPC-ADDL-CL: [8] H04Q 007#38 (20060101) Advanced Inventive 20051220 (A L I R M JP)

PRIM-EXMR: Edwards, Jr., Timothy

REF-CITED:

3967273, June 29, 1976, Knowlton, United States of America (US)
4737980, April 12, 1988, Curtin et al., United States of America (US)
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02014996, February, 2002, World Intellectual Property Organization (WIPO) (WO)

NON-PATENT LITERATURE:

Patent Abstracts of Japan, Ono Katsuyasu: "Adjacent Character Display Keyboard," Publication No. 07200120, Apr. 8, 1995, Application No. 05355185, Dec. 28, 1993.

CORE TERMS: keypad, display, secondary, user, displayed, default, input, touchscreen, mobile, phone,



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SECTION: Pg. p34(7) Vol. V91 No. N8 ISSN: 0040-1692

ACC-NO: 6885318

LENGTH: 2857 words

HEADLINE: Artificial organs: learning to live with risk.

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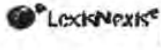
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REISSUE APPLICATION DECLARATION BY THE ASSIGNEE	Docket Number (optional) 2001PF00413
<p>I hereby declare that:</p> <p>The residence, mailing address and citizenship of the inventors are stated below.</p> <p>I am authorized to act on behalf of the following assignee: <u>KONINKLIJKE PHILIPS ELECTRONICS N.V.</u></p> <p>and the title of my position with said assignee is: <u>AUTHORIZED SIGNATORY</u></p> <p>The entire title to the patent identified below is vested in said assignee.</p>	
Inventor <u>Matthew J. Bickerton</u>	Citizenship <u>GB</u>
Residence/Mailing Address <u>Tye Copse Cottage, Bletchingley, GB RH14NE</u>	
Inventor	Citizenship
Residence/Mailing Address	
<input type="checkbox"/> Additional Inventors are named on separately numbered sheets attached hereto.	
Patent Number <u>6,885,318</u>	Date of Patent Issued <u>April 26, 2005</u>
<p>I believe said inventor(s) to be the original and first inventor(s) of the subject matter which is described and claimed in said patent, for which a reissue patent is sought on the invention entitled:</p> <div style="border: 1px solid black; padding: 10px; min-height: 40px;"> <p style="text-align: center;">TEXT ENTRY METHOD AND DEVICE THEREFOR</p> </div> <p>the specification of which</p> <p><input type="checkbox"/> is attached hereto.</p> <p><input checked="" type="checkbox"/> was filed on <u>July 31, 2013</u> as reissue application number <u>13</u> / <u>955,345</u></p> <p>and was amended on <u>July 31, 2013</u></p> <p style="text-align: center;">(If applicable)</p> <p>I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.</p> <p>I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.</p> <p><input checked="" type="checkbox"/> I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/02B (or equivalent) listing the foreign applications.</p> <p>I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)</p> <p><input type="checkbox"/> by reason of a defective specification or drawing.</p> <p><input checked="" type="checkbox"/> by reason of the patentee claiming more or less than he had the right to claim in the patent.</p> <p><input type="checkbox"/> by reason of other errors.</p>	

[Page 1 of 2]

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At least one error upon which reissue is based is described as follows:
 The error in the patent is caused by the patentee claiming more than he had a right to claim in the patent. (con't on attached sheet)

[Attach additional sheets, if needed.]

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.

I hereby appoint:

Practitioners associated with Customer Number: 24737

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Signature /Michael E. Marion/ Date March 5, 2014

Full name of person signing (given name, family name) Michael E. Marion

Address of Assignee P.O. Box 3001, Briarcliff Manor, NY 10510

ADDITIONAL STATEMENT OF ERROR UPON WHICH REISSUE IS BASED

The patentee believes the original Patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more than the patentee had the right to claim in the Patent. Specifically, the error in the Patent is caused by the omission of a narrower claim from the Patent that renders the Patent partly inoperative by failing to protect the disclosed invention to the full extent allowed by law.

The patentee respectfully asserts that the error is corrected by an amendment that adds at least one dependent claim, for example claim 8, which protects the disclosed invention in accordance with the specification of the Patent, thus improving on the state of the art. For example, claim 8 is added to recite that "the means for switching to a second state comprises a means for detecting a sliding across the keypad from the first key selection to the second key selection." Support for the subject matter of the claim is provided by the Patent, in the accompanying description for example contained in col. 3, line 66 through col. 4, line 5. Previously the patentee had neglected, without deceptive intent, to protect this disclosed invention in accordance with the specification of the Patent.

Further, the patentee has elected to amend claim 1 for example to recite that (e.g., see, Patent, FIGs. 1-5 and the accompanying description contained in col. 5, line 65 through col. 6, line 19, changes to the claim element indicated with underlining showing additions) "in the default state, returning the primary character as an input character in response to selection of the at least one key for a period shorter than a predetermined time period; switching to a second state after detecting a first key selection of the at least one key for a period longer than a predetermined time period; in the second state, displaying each of the secondary characters associated ..." Patentee has also elected to amend claim 1 for example for better conformance to U.S. practice such as clarifying antecedence language where for example, "selecting for input the secondary character ..." is clarified as "selecting for the input character the secondary character ..."

No new matter is added by this amendment in this reissue application. All errors in the Patent being corrected in the present reissue application up to the time of filing this oath/declaration that are not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the patentee.

Electronic Acknowledgement Receipt

EFS ID:	18380310
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Michael E. Belk/Elissa DeLuccy
Filer Authorized By:	Michael E. Belk
Attorney Docket Number:	2001P00413US01
Receipt Date:	05-MAR-2014
Filing Date:	31-JUL-2013
Time Stamp:	16:51:49
Application Type:	Utility under 35 USC 111(a)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket: 2001PF00413US01

MATTHEW J. BICKERTON

Confirmation No.: 6652

Original Patent No: 6,885,318

Original Issue date: APRIL 26, 2005

Serial No.: 13/955,345

Group Art Unit: 2681

Filed: JULY 31, 2013

Examiner: N/A

Title: TEXT ENTRY METHOD AND DEVICE THEREFOR

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

REPLY

Sir:

Please consider the remarks in the Application as follows:

REMARKS/ARGUMENTS

Claims 1-16 are pending in the Application.

Please discard the declaration previously filed today and substitute the declaration submitted herewith. The declaration submitted herewith includes the updated USPTO Reissue Application Declaration by the Assignee Form PTO/AIA/06 in place of USPTO Form PTO/SB/52 previously filed.

It is respectfully submitted that the reissue oath/declaration is proper and an indication to that effect is respectfully requested.

A diligent and sincere effort to place this Patent back in condition for immediate allowance is made herein and notice to this effect is earnestly solicited.

Respectfully submitted,

By /Gregory L. Thorne/

Gregory L. Thorne, Reg. 39,398
Attorney for Applicant(s)

THORNE & HALAJIAN, LLP
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Bay Shore, NY 11706
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<p>Inventor Matthew J. Bickerton</p>			
Residence: City Bletchingley		State	Country GB
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<input type="checkbox"/> Additional Inventors are named on separately numbered sheets attached hereto.			
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Full name of person signing (given name, family name) Michael E. Marion													
Address of Assignee P.O. Box 3001, Briarcliff Manor, NY 10510													

ADDITIONAL STATEMENT OF ERROR UPON WHICH REISSUE IS BASED

The patentee believes the original Patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more than the patentee had the right to claim in the Patent. Specifically, the error in the Patent is caused by the omission of a narrower claim from the Patent that renders the Patent partly inoperative by failing to protect the disclosed invention to the full extent allowed by law.

The patentee respectfully asserts that the error is corrected by an amendment that adds at least one dependent claim, for example claim 8, which protects the disclosed invention in accordance with the specification of the Patent, thus improving on the state of the art. For example, claim 8 is added to recite that "the means for switching to a second state comprises a means for detecting a sliding across the keypad from the first key selection to the second key selection." Support for the subject matter of the claim is provided by the Patent, in the accompanying description for example contained in col. 3, line 66 through col. 4, line 5. Previously the patentee had neglected, without deceptive intent, to protect this disclosed invention in accordance with the specification of the Patent.

Further, the patentee has elected to amend claim 1 for example to recite that (e.g., see, Patent, FIGs. 1-5 and the accompanying description contained in col. 5, line 65 through col. 6, line 19, changes to the claim element indicated with underlining showing additions) "in the default state, returning the primary character as an input character in response to selection of the at least one key for a period shorter than a predetermined time period; switching to a second state after detecting a first key selection of the at least one key for a period longer than a predetermined time period; in the second state, displaying each of the secondary characters associated ..." Patentee has also elected to amend claim 1 for example for better conformance to U.S. practice such as clarifying antecedence language where for example, "selecting for input the secondary character ..." is clarified as "selecting for the input character the secondary character ..."

No new matter is added by this amendment in this reissue application. All errors in the Patent being corrected in the present reissue application up to the time of filing this oath/declaration that are not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the patentee.

Electronic Acknowledgement Receipt

EFS ID:	18382342
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Gregory L. Thorne
Filer Authorized By:	
Attorney Docket Number:	2001P00413US01
Receipt Date:	05-MAR-2014
Filing Date:	31-JUL-2013
Time Stamp:	18:28:25
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	Miscellaneous Incoming Letter	2001PF00413US01_reissue_repl ly_03_05_14.pdf	40625 <small>917999b28892c72758819dcaae08705234f e72d5</small>	no	2

Warnings:

Information:

2	Oath or Declaration filed	2001PF00413US01_reissue_de c_complete_03_05_14.pdf	175820 <small>0c0949354d3d4002de5b6f412c8f55a950 1004</small>	no	3
Warnings:					
Information:					
Total Files Size (in bytes):				216445	
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTICE OF ALLOWANCE AND FEE(S) DUE

24737 7590 03/12/2014
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
WONG, ALBERT KANG

ART UNIT PAPER NUMBER
2689

DATE MAILED: 03/12/2014

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/955,345 07/31/2013 Matthew J. Bickerton 2001P00413US01 6652

TITLE OF INVENTION: TEXT ENTRY METHOD AND DEVICE THEREFOR

Table with 7 columns: 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 06/12/2014

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)

24737 7590 03/12/2014
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
 P.O. BOX 3001
 BRIARCLIFF MANOR, NY 10510

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.
13/955,345	07/31/2013	Matthew J. Bickerton	2001P00413US01	6652

TITLE OF INVENTION: TEXT ENTRY METHOD AND DEVICE THEREFOR

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	06/12/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
WONG, ALBERT KANG	2689	341-022000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "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.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) The names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(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</p> <p>_____ 3</p>
--	---

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> 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).</p>
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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. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/955,345	07/31/2013	Matthew J. Bickerton	2001P00413US01	6652

24737 7590 03/12/2014
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

WONG, ALBERT KANG

ART UNIT PAPER NUMBER

2689

DATE MAILED: 03/12/2014

Determination of Patent Term Extension or Adjustment under 35 U.S.C. 154 (b)

A reissue patent is for "the unexpired part of the term of the original patent." See 35 U.S.C. 251. Accordingly, the above-identified reissue application is not eligible for Patent Term Extension or Adjustment under 35 U.S.C. 154(b).

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. 13/955,345	Applicant(s) BICKERTON, MATTHEW J.	
	Examiner ALBERT WONG	Art Unit 2689	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.

- This communication is responsive to the application filed 7/31/13.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
- 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.
- The allowed claim(s) is/are 1-16. 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.
- 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. 10/156,409.
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.

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

Art Unit: 2689

1. The present application is being examined under the pre-AIA first to invent provisions. The application is a reissue of application 10/156,409, Patent 6,885,318, filed May 28, 2002 which claims foreign priority to UK application 0116083.7, filed June 30, 2001. Claims 1-16 are pending.

2. Claims 1-16 are allowed.

3. The following is an examiner's statement of reasons for allowance: The claims recite an apparatus, a method of operating the apparatus, and a computer program product for executing the method wherein the device displays a default character associated with a key when the key is pressed for a period shorter than a predetermined time and when the key is pressed for a longer period secondary characters are displayed which are selected by a second key pressing, wherein the keyboard returns to the default state after the second key pressing. Such a combination is not taught, suggested, or made obvious by the prior art of record..

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."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT WONG whose telephone number is (571)272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Mehmood can be reached on 571-272-2976. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 13/955,345
Art Unit: 2689

Page 3

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.

/ALBERT WONG/
Primary Examiner, Art Unit 2689

February 2, 2014

Notice of References Cited	Application/Control No. 13/955,345	Applicant(s)/Patent Under Reexamination BICKERTON, MATTHEW J.	
	Examiner ALBERT WONG	Art Unit 2689	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-4,099,246	07-1978	Osborne et al.	708/146
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.

Issue Classification 	Application/Control No. 13955345	Applicant(s)/Patent Under Reexamination BICKERTON, MATTHEW J.
	Examiner ALBERT WONG	Art Unit 2689

<input checked="" type="checkbox"/> Claims renumbered in the same order as presented by applicant																<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original						
	1																				
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	16																				

NONE		Total Claims Allowed:	
		16	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/ALBERT WONG/ Primary Examiner, Art Unit 2689	02/02/2014	1	1
(Primary Examiner)	(Date)		


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BIB DATA SHEET
CONFIRMATION NO. 6652

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
13/955,345	07/31/2013	341	2689	2001P00413US01		
RULE						
APPLICANTS						
INVENTORS						
Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;						
** CONTINUING DATA *****						
This application is a REI of 10/156,409 05/28/2002 PAT 6885318						
** FOREIGN APPLICATIONS *****						
UNITED KINGDOM 0116083.7 06/30/2001						
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **						
08/30/2013						
Foreign Priority claimed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Met after Allowance	UNITED KINGDOM	6	16	3
Verified and	/ALBERT KANG WONG/ Examiner's Signature	Initials				
Acknowledged						
ADDRESS						
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510 UNITED STATES						
TITLE						
TEXT ENTRY METHOD AND DEVICE THEREFOR						
FILING FEE RECEIVED	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		
3180						

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

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Matthew J. Bickerton	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	2001P00413US01	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5128672		1992-07-07	KAEHLER	
	2	6009444		1999-12-28	CHEN	
	3	6271835	B1	2001-08-07	HOEKSMAN	
	4	3967273		1976-06-29	KNOWLTON	
	5	4737980		1988-04-12	CURTIN ET AL	
	6	4999795		1991-03-12	LAPEYRE	
	7	5124940		1991-06-23	LAPEYRE	
	8	5818437		1998-10-06	GROVER ET AL	

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	Attorney Docket Number	2001P00413US01	

9	5952952		1999-09-14	CHOI ET AL	
10	6016538		2000-01-18	GUTTAG ET AL	
11	6169538	B1	2001-01-02	NOWLAN ET AL	
12	6359572	B1	2002-03-19	VALE	
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	1	200214996	WO	A1	2002-02-21	MOELGAARD		<input type="checkbox"/>

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	Filing Date			
	First Named Inventor	Matthew J. Bickerton		
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	2	07200120	JP	A	1995-08-04	KATSUYASU		<input type="checkbox"/>
	3	4127310	JP		1992-04-28	UEDA		<input type="checkbox"/>
	4	04999794	JP	B2	2012-08-15	ARAI		<input type="checkbox"/>
	5	0889388	EP	A1	1999-07-01	LU		<input type="checkbox"/>

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Examiner Signature	/Albert Wong/ (02/02/2014)	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.

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	Filing Date		
	First Named Inventor	Matthew J. Bickerton	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	2001P00413US01	

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.

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

None

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	/Michael E. Belk/	Date (YYYY-MM-DD)	2013-07-25
Name/Print	Michael E. Belk	Registration Number	33,357

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.**

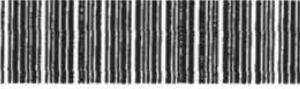
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this 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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Search Notes 	Application/Control No. 13955345	Applicant(s)/Patent Under Reexamination BICKERTON, MATTHEW J.
	Examiner ALBERT WONG	Art Unit 2689

CPC- SEARCHED		
Symbol	Date	Examiner
h03k 17/94; g06f 15/02, 3/0238	2/3/14	AKW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
341	20, 22	2/3/14	AKW
345	168		
379	368		
400	486		
708	131, 145, 146		

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search terms: keyboard, multi-function, keys, default, press, duration, time, timer, phone, menu	2/3/14	AKW

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

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

PTO/SB/30EFS (07-09)
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	13955345	Filing Date	2013-07-31	Docket Number (if applicable)	2001P00413US01	Art Unit	2689
First Named Inventor	Matthew J. Bickerton			Examiner Name	Albert Kang Wong		
This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).							
<input type="checkbox"/> Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked. <input type="checkbox"/> Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____ <input type="checkbox"/> Other _____							
<input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Amendment/Reply <input checked="" type="checkbox"/> Information Disclosure Statement (IDS) <input type="checkbox"/> Affidavit(s)/ Declaration(s) <input type="checkbox"/> Other _____							
MISCELLANEOUS							
<input type="checkbox"/> Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required) <input type="checkbox"/> Other _____							
FEES							
<input checked="" type="checkbox"/> The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed. The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 141270							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
<input checked="" type="checkbox"/> Patent Practitioner Signature <input type="checkbox"/> Applicant Signature							

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

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Signature of Registered U.S. Patent Practitioner			
Signature	/Michael E. Belk/	Date (YYYY-MM-DD)	2014-03-18
Name	Michael E. Belk	Registration Number	33357

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

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

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13955345
	Filing Date	2013-07-31
	First Named Inventor	Matthew J. Bickerton
	Art Unit	2689
	Examiner Name	Albert Kang Wong
	Attorney Docket Number	2001P00413US01

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	1	5798716	A	1998-08-25	DAVIS	
	2	6043760	A	2000-03-28	LAKKONEN	
	3	6130628	A	2000-10-10	SCHNEIDER-HUFSCHMIDT ET AL	
	4	6295052	B1	2001-09-25	KATO ET AL	
	5	5956021	A	1999-09-21	KUBOTA ET AL	
	6	6686902	A1	2002-04-11	LEE	
	7	5861823	A	1999-01-19	STRAUCH ET AL	
	8	6271835	B1	2001-08-07	HOEKSMAS	

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	Attorney Docket Number	2001P00413US01

9	6016142	A	2000-01-18	CHANG ET AL	
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	1	2001125720	JP	A	2001-05-11	NI ET AL		<input checked="" type="checkbox"/>
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	3	2000172417	JP	A	2000-06-23	URITA		<input checked="" type="checkbox"/>
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	Filing Date		2013-07-31
	First Named Inventor	Matthew J. Bickerton	
	Art Unit	2689	
	Examiner Name	Albert Kang Wong	
	Attorney Docket Number	2001P00413US01	

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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.

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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.

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(21) 出願番号	特願平10-227000	(73) 特許権者	000002185 ソニー株式会社 東京都港区港南1丁目7番1号
(22) 出願日	平成10年8月11日(1998.8.11)	(74) 代理人	100094053 弁理士 佐藤 隆久
(65) 公開番号	特開2000-56912(P2000-56912A)	(72) 発明者	坂田 雅章 神奈川県横浜市保土ヶ谷区神戸町134番 地 ソニー・エルエスアイ・デザイン株式 会社内
(43) 公開日	平成12年2月25日(2000.2.25)	審査官	藤塚 隆
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(54) 【発明の名称】 文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体

(57) 【特許請求の範囲】

【請求項1】

特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であって、

文字情報を格納する文字情報格納手段と、

文字情報を一覧表示するための文字一覧表示手段や、文字情報の任意の文字における少なくとも1つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、
を有し、

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力装置。

【請求項2】

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文字種別は、日本語を入力する場合には、清音、濁音、半濁音、拗音または促音と、全角平仮名、半角平仮名、全角片仮名または半角片仮名との組み合わせであり、それ以外の言語を入力する場合には、大文字及び小文字である

請求項 1 に記載の文字入力装置。

【請求項 3】

文字種別表示手段に表示される各文字種別毎の文字は、それぞれ縦方向、横方向又は方眼状に配列される

請求項 1 に記載の文字入力装置。

【請求項 4】

指示手段は、タブレットに対して指示するポインティングデバイス又はマウスポインタである

請求項 1 に記載の文字入力装置。

【請求項 5】

特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であって、

文字情報を格納する文字情報格納手段と、

文字情報を一覧表示するための第 1 文字一覧表示手段や、文字情報の任意の文字における少なくとも 1 つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、

を有し、

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための第 1 文字一覧表示手段を表示手段に表示し、

第 1 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、第 1 文字一覧表示手段より詳細な文字情報を表す第 2 文字一覧表示手段を表示手段に表示し、

第 2 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別の文字が指示手段によって指示されてその位置から離されると、文字種別表示手段において離れた位置に表示されている文字種別に該当する文字情報を第 1 文字一覧表示手段に表示する

ことを特徴とする文字入力装置。

【請求項 6】

特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であって、

文字情報を格納する文字情報格納手段と、

文字情報を一覧表示するための文字一覧表示手段や、文字情報の任意の文字における少なくとも 1 つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、

を有し、

特定の文字種別に該当する複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

表示手段に表示された文字一覧表示手段の内の任意の文字が指示手段によって予め決められた時間指示され続けると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段を摺動するように文字種別表示手段の内の任意の文字を指示手段によって指示され、その位置から離されると、文字種別表示手段において離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力装置。

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【請求項 7】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力方法。

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【請求項 8】

文字種別は、日本語を入力する場合には、清音、濁音、半濁音、拗音または促音と、全角平仮名、半角平仮名、全角片仮名または半角片仮名との組み合わせであり、それ以外の言語を入力する場合には、大文字及び小文字である

請求項 7 に記載の文字入力方法。

【請求項 9】

文字種別表示手段に表示される各文字種別毎の文字は、それぞれ縦方向、横方向又は方眼状に配列される

請求項 7 に記載の文字入力方法。

【請求項 10】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための第 1 文字一覧表示手段を表示手段に表示し、

第 1 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、第 1 文字一覧表示手段より詳細な文字情報を表す第 2 文字一覧表示手段を表示手段に表示し、

第 2 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別の文字が指示手段によって指示されてその位置から離されると、文字種別表示手段において離れた位置に表示されている文字種別に該当する文字情報を第 1 文字一覧表示手段に表示する

ことを特徴とする文字入力方法。

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【請求項 11】

特定の文字種別に該当する複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

表示手段に表示された文字一覧表示手段の内の任意の文字が指示手段によって予め決められた時間指示され続けると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段を摺動するように文字種別表示手段の内の任意の文字が指示手段によって指示され、その位置から離されると、文字種別表示手段において離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力方法。

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【請求項 12】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

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文字入力機能を有するプログラムを記録したことを特徴とする情報記録媒体。

【請求項 13】

文字種別は、日本語を入力する場合には、清音、濁音、半濁音、拗音または促音と、全角平仮名、半角平仮名、全角片仮名または半角片仮名との組み合わせであり、それ以外の言語を入力する場合には、大文字及び小文字である

文字入力機能を有するプログラムを記録した請求項 12 に記載の情報記録媒体。

【請求項 14】

文字種別表示手段に表示される各文字種別毎の文字は、それぞれ縦方向、横方向又は方眼状に配列される

文字入力機能を有するプログラムを記録した請求項 12 に記載の情報記録媒体。

【請求項 15】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための第 1 文字一覧表示手段を表示手段に表示し、

第 1 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、第 1 文字一覧表示手段より詳細な文字情報を表す第 2 文字一覧表示手段を表示手段に表示し、

第 2 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別の文字が指示手段によって指示されてその位置から離されると、文字種別表示手段において離れた位置に表示されている文字種別に該当する文字情報を第 1 文字一覧表示手段に表示する

文字入力機能を有するプログラムを記録したことを特徴とする情報記録媒体。

【請求項 16】

特定の文字種別に該当する複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

表示手段に表示された文字一覧表示手段の内の任意の文字が指示手段によって予め決められた時間指示され続けると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段を摺動するように文字種別表示手段の内の任意の文字が指示手段によって指示され、その位置から離されると、文字種別表示手段において離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

文字入力機能を有するプログラムを記録したことを特徴とする情報記録媒体。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】

この発明は、文字を入力するための文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体に関するものである。

【0002】

【従来の技術】

近年、情報産業の発達によって様々な情報の活用がなされている。例えば、業務や個人的な情報を管理して、さらにこの情報を利用するためには、例えばパーソナルコンピュータや情報携帯端末機器（以下略して情報機器と呼ぶ）等が利用されている。例えば前述の情報機器を一例として説明すると、この情報機器は、例えば使用者が所定のポインティングデバイスを使用して、情報機器に設けられた表示部に内蔵する所定のソフトウェアによって表示された画面が操作されることで操作される。このような画面は、通常 GUI (G r 50

aphical User Interface)と呼ばれるユーザインターフェイスが採用され、使用者が操作しやすいようになっている。このような情報機器は、性能を向上させると共に個人が携帯しやすいように小型化を図る競争が行われている。

【0003】

このように情報機器が小型化されると、当然表示部の表示面積が小さくなる。従って、所定のソフトウェアによって表示部に表示される表示物が小さくなり、GUIの操作性が低下するという欠点がある。以下、例えば表示部に表示されるものとしてソフトキーボードを一例として具体的にその欠点について説明する。尚、「ソフトキーボード」とは、文字を情報機器に入力できるキーボード機能を有するソフトウェアをいうものとする。

【0004】

【発明が解決しようとする課題】

図25～図27は、それぞれ表示部に表示される従来のソフトキーボードの表示状態を示す図である。

図25においては、ソフトキーボード106は、例えば全角平仮名表示領域107、全角片仮名表示領域108及び半角片仮名表示領域109を有する。

従って、ソフトキーボード106は、表示面積の小さな表示部に表示されると1つ1つの文字が小さくなり見づらいこと及び、平仮名及び片仮名並びに全角及び半角といったような文字種別によって大きな表示面積を必要とすることが生ずる。

【0005】

図26(A)～(C)においては、ソフトキーボード106は、図25の欠点を除去するために複数の文字種別の文字情報を1つの画面で表示することにしたものである。したがって、ソフトキーボード106は、文字情報を表示するための表示領域以外に、例えば全角平仮名ボタン106a、全角片仮名ボタン106b及び半角片仮名ボタン106cを有する。図26(A)～(C)のソフトキーボード106では、文字種別としての全角平仮名、全角片仮名及び半角片仮名を区別して文字情報を表示するのに、使用者が各ボタンを操作する必要がある。

【0006】

図27においては、ソフトキーボード106は、図26(A)～(C)の文字情報の表示領域の面積を小さくするために濁点、半濁点を付加したり、又は例えばローマ字等を入力できるソフトキーボードにおいて大文字表示を小文字表示又は、小文字表示を大文字表示にするための入力部(それぞれ図27の濁音キー106e及び半濁音キー106f、又は小文字ボタン106b)を設けている。このようなソフトキーボード106では、操作者が一々所望の文字種別の文字情報に切り替えなければならない。

【0007】

そこでこの発明は上記課題を解消し、簡単且つ正確に文字入力を行うことができ、文字一覧表示手段の表示面積の小さな文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体を提供することを目的としている。

【0008】

【課題を解決するための手段】

上記目的は、この発明にあつては、特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であつて、文字情報を格納する文字情報格納手段と、文字情報を一覧表示するための文字一覧表示手段や、文字情報の任意の文字における少なくとも1つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、を有し、特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に

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該当する文字情報を文字一覧表示手段に表示することを特徴とする文字入力装置により、達成される。

【0009】

この発明では、表示手段には、特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段が表示される。使用者は、指示手段によって文字一覧表示手段の任意の文字を指示する。すると、表示手段には、指示手段によって指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段が表示される。使用者は、文字種別表示手段の所望の文字を指示手段によって指示して指示手段を離す。これにより、表示手段には、文字種別表示手段において離れた位置に表示されていた文字の文字種別に該当する文字情報が表示される。

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【0010】

【発明の実施の形態】

以下、この発明の好適な実施の形態を添付図面に基づいて詳細に説明する。

なお、以下に述べる実施の形態は、この発明の好適な具体例であるから、技術的に好ましい種々の限定が付されているが、この発明の範囲は、以下の説明において特にこの発明を限定する旨の記載がない限り、これらの形態に限られるものではない。

【0011】

以下の説明中、「文字種別」とは、日本語を入力する場合には、直音、濁音、半濁音、拗音、促音、慣用特殊文字、平仮名及び片仮名並びにこれらと全角及び半角の組み合わせを示し、それ以外の言語（例えば英語等）を入力する場合には、大文字及び小文字を示す。「文字情報」とは、文字種別毎の複数の文字を示す。以下の説明で、情報機器において文字入力するためにキーボードをソフトウェアで表示するが、「キー」とは、通常のキーボードのキーに該当するソフトウェアによって表示されたのキー（ソフトキー）を示すものとする。

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【0012】

第1実施形態

図1は、この発明の第1実施形態としての文字入力装置に対して文字を入力する様子を示す斜視図である。

文字入力装置1は、例えば携帯型の情報を管理するための情報機器である。文字入力装置1は、筐体としての本体1a、本体1aの一表面に設けられたタブレット7（指示手段）、タブレット7に密着するようにタブレット7及び本体1aの間に設けられた表示部5（表示手段）を有する。上記表示部5は、例えば液晶ディスプレイであり、後述する文字入力ソフトウェアとしてのソフトキーボード6（文字入力機能を有するプログラムの一部としての文字一覧表示手段）が表示される。上記本体1aは、その内部に後述する図2のような制御回路8を有する。

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【0013】

図2は、図1の文字入力装置における制御回路の簡略化した構成例を示す構成図である。制御回路8は、制御部9、記憶部11、外部記憶部13、タブレット7（指示手段）及び表示部5（表示手段）を有する。尚、制御回路8は、タブレット7の代わりに、表示部5のポインティングデバイスとしてのいわゆるマウス等を備えているような構成であっても良い。

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【0014】

上記制御部9は、例えばCPU（中央演算処理装置）である。制御部9は、記憶部11、外部記憶部13、タブレット7及び表示部5と接続されている。制御部9は、記録部11に記録された情報等に基づいて、文字入力装置1全体を制御している。

【0015】

上記記憶部11は、例えばRAM（Random Access Memory）やROM（Read Only Memory）である。記憶部11は、ソフトキーボード6（及び基本ソフト等）が動作するための作業領域である。

【0016】

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上記外部記憶部13は、例えばハードディスクである。外部記憶部13は、上述したソフトキーボード6を格納する。ソフトキーボード6は、起動されると、例えば制御部9によって記憶部11上で動作する。ソフトキーボード6についての説明は、後述する。

【0017】

上記タブレット7は、例えばペンタッチ型のタッチパネルである。このタブレット7は、ユーザが例えばペン型であって先の尖った形状をしたポインティングデバイス3（指示手段）にてタブレット7の所定の位置に触れて、上下略2層の抵抗層が接触することにより所定の電極に生ずる電圧が変化し、後述する図2の制御部9が、その位置を認識する入力装置である。タブレット7は透明な部材であり、その下層には表示部5が配置されている。これにより、ユーザは、表示部5の表示を透明なタブレット7を介して視認できるようになっている。

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【0018】

図3は、図1のソフトキーボードの機能例を図示した機能ブロック図である。ソフトキーボード6は、ドラッグメニュー情報テーブル17（文字情報格納手段）及び文字情報表示手段19を有する。以下の説明で「ドラッグ」とは、例えば使用者が、ポインティングデバイス3の先端3aを表示部5に表示されたソフトキーボード6等に接触させた状態で、タブレット7の表面上を摺動させることをいうものとする。

【0019】

上記ドラッグメニュー情報テーブル17は、例えば文字種別毎の文字を格納する。ドラッグメニュー情報テーブル17は、後述する文字情報表示手段19によって図8のようなドラッグメニュー18（文字種別表示手段）が表示された際にそのドラッグメニュー18を表示するための情報（以下、ドラッグメニュー情報という）が読み出される。ドラッグメニュー情報の一例としては、図4のような形式となっている。つまり、タブレット7がタッチ（以下、ポインティングデバイス3によってソフトキーボード6を指示したことをいう）された際のソフトキーボード6において押されたキーに対応する文字種別毎の文字が格納されている。

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【0020】

上記文字情報表示手段19は、例えば図2の制御部9の制御によって記憶部11を作業領域として使用するソフトウェアである。文字情報表示手段19は、図1の表示部5にソフトキーボード6を表示する際にドラッグメニュー情報テーブル17を検索して、例えば図6(A)～(C)のように文字種別毎に文字情報を表示させる。文字情報表示手段19は、ソフトキーボード6が表示部5に表示された状態（図7）で使用者がタブレット7をタッチして（この位置を第1位置Aと呼ぶ）、例えば図8のようなドラッグメニュー18を表示させる際にドラッグメニュー情報テーブル17を検索してドラッグメニュー情報を表示させる。

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【0021】

文字情報表示手段19は、ドラッグメニュー18として図8のような画面を表示部5に表示する。このドラッグメニュー18は、ポインティングデバイス3によってタッチした文字に基づいて図4のドラッグメニュー情報テーブル17を検索して該当する全ての文字種別に該当する文字を表示する。ドラッグメニュー18は、好ましくは図4のドラッグメニュー情報テーブル17を検索して、図8のように各文字種別（図4の表示するドラッグメニューの選択枝）毎にいくつかの文字単位で区分されていると良い。これは、使用者がソフトキーボード6を使用する際に文字種別毎の文字を認識しやすいためである。

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【0022】

以上文字入力装置の構成例について説明したが、次にその動作について説明する。図5は、図1の文字入力装置における文字情報表示手段の詳細な動作例を示すフローチャートである。

以下の説明では、ソフトキーボード6が文字入力装置1において既に起動されている状態（図7のソフトキーボード6が図1の表示部5に表示された状態）から説明する。図5において「=」は、イコールを意味するのではなく、右辺の変数を左辺の変数に代入するこ

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とを意味している。「＝」とは、左辺と右辺を比較することを意味する。また、説明中登場する図2の記憶部11上で使用される変数として、以下のものがある。

【0023】

input_key 変数 : 確定入力文字
 pressed_key 変数 : 押されたキー
 menu_done 変数 : ドラッグメニュー表示中を表すフラグ

【0024】

ソフトキーボード6が表示された状態で(ステップST1)、input_key変数に空白にし、pressed_key変数は不定状態とし、menu_done変数にfalse(ドラッグメニュー18が非表示であることを示し、trueはドラッグメニュー18が表示中であることを表す)を代入する(ステップST2)。

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【0025】

図2の制御部9は、使用者がポインティングデバイス3によってキーがタッチされたかどうかの状態を検出する。使用者によってキーがタッチされ、ドラッグメニュー18が表示されたかどうかをチェックする(ステップST4)。

【0026】

ドラッグメニュー18が表示されていないければ、キー(ソフトキー)が押されたかどうかを判断し(ステップST14)、押されていないければステップST3に戻り、押されているれば例えばpress_key変数に押されたキー(に対応するコード)を代入し(ステップST15)、このpress_key変数に基づいて図4のドラッグメニュー情報テーブル17を検索して、該当する文字を表すドラッグメニュー18を表示する(ステップST16)。そして、menu_done変数にtrueを代入し(ステップST17)、ポインティングデバイス3によって指示された文字を反転させる。

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【0027】

ドラッグメニュー18が表示されていれば、使用者がポインティングデバイス3をキーから離れたかどうかを検出する(ステップST5)。離されていないければ、ポインティングデバイス3がドラッグしたかどうかを検出し(ステップST11)、ドラッグしていないければステップST3に戻り、ドラッグしていればドラッグで抜けたキーの反転表示を中止し、ポインティングデバイス3によってドラッグで進入した領域を示すキーを反転表示する(ステップST12)。そして、進入したキー(の例えば文字コード)をpressed_key変数に代入する(ステップST13)。そして、ステップST3に進む。

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【0028】

離されていれば、input_key変数にpressed_key変数を代入して(つまり押したキーの情報を代入)、pressed_key変数に格納された(例えば文字コードに該当する)文字の文字種別(文字種)に従って、ソフトキーボード6を図6(A)～(C)のいずれかのように再表示する(ステップST7)。そして同時に、ドラッグメニュー18表示を消去し(ステップST8)、menu_done変数にfalseを代入する(ステップST9)。pressed_key変数は不定状態とし(ステップST10)、ステップST3に戻る。

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【0029】

以上が文字情報表示手段19等の内部処理を詳細に説明したものであるが、次に使用者側から見た場合の文字入力装置1の動作について説明する。

使用者は、文字を入力するソフトウェアを使用中である。使用者は、図8のように所望の文字(「ウ」又は「ヴ」等)をポインティングデバイス3によって入力しようとしている。しかし、文字入力装置1には、全角平仮名の文字種別の文字情報が表示されているので、使用者は、表示中の文字種別を変更するために、ポインティングデバイス3によって「う」をタッチする。

【0030】

ソフトキーボード6は、図7の状態から図8のようにドラッグメニュー18が表示される

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。使用者が図9(A)のようにポインティングデバイス3によってドラッグメニュー18の任意の文字をタッチすると(例えば第1位置Aからポインティングデバイス3をドラッグメニュー18をドラッグするようにして)、ソフトキーボード6に表示されている文字情報が図9(B)のようにその文字の文字種別に該当する文字情報に変更される。尚、ドラッグメニュー18を図7のように消滅させたい場合には、ドラッグメニュー18以外の部分をタッチすればよい。

【0031】

一方、例えば使用者が文字入力装置1によって英文字を入力しようとした場合には、図10のようにソフトキーボード6が表示された状態(この説明では「文字情報」が表示された状態を示す)で、入力しようとしている文字としての「n」をポインティングデバイス3でタッチすると図11のようにドラッグメニュー18が表示される。尚、図11のドラッグメニュー18では、左から全角「N」、「n」、半角「N」、「n」の順に表示されている。この表示順は、例えば図4のドラッグメニュー情報テーブル17に格納されている順番である(図4では、一例であるので日本語の文字のみを格納している)。

【0032】

使用者は、図12(A)のように全角の「N」を入力しようとしてドラッグメニュー18の「N」をタッチする。ソフトキーボード6は、図12(B)のように文字種別が全角の表示となる。

【0033】

この発明の第1実施形態によれば、簡単且つ正確に文字入力装置1に対して文字を入力することができ、各文字種別毎に文字情報を表示しない及び従来必要とされていた文字種別を切り替えるための切替手段(例えばボタン等)が不要であり、ソフトキーボード6の表示面積を従来より小さくすることができながら、GUI(Graphical User Interface)の操作性が良く、特に表示部5の表示領域が決まっている場合には特に効果がある。

【0034】

第2実施形態

図13~16は、この発明の第2実施形態としての文字入力装置のソフトキーボードの表示例を示す図である。

図13~16の文字入力装置1は、第1実施形態と同様の構成をしており、そのソフトキーボード6の日本語表示方法において、以下の点が異なる。

ソフトキーボード6の表示(第1文字一覧表示手段)は、例えば図13のように「あ」、「か」・・・、「わ」というように、50音の先頭文字のみが表示されている。使用者は、ポインティングデバイス3にて所望の文字の先頭文字をタッチして図14のような行ドラッグメニュー16(以下行メニュー16と略す、第2文字一覧表示手段)を表示させる。

【0035】

使用者は、所望の文字と同一の文字種別の文字をタッチして図15のようにドラッグメニュー18を表示させる。使用者は、図16(A)のようにポインティングデバイス3をドラッグメニュー18を摺動させて、所望の文字種別(全角の片仮名)の文字(「ヴ」)をポインティングデバイス3でタッチすると、図16(B)のように文字種別が全角の片仮名に変更される。

【0036】

この発明の第2実施形態によれば、第1実施形態の効果に加えて、さらに第1実施形態よりもソフトキーボード6の表示領域を小さくすることができる。

【0037】

第3実施形態

図17~20は、この発明の第3実施形態としての文字入力装置のソフトキーボードの表示例を示す図である。

図17~20の文字入力装置1は、第1実施形態と同様の構成をしており、そのソフトキ

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ーボード6のドラッグメニュー18の表示方法において以下の点が異なる。

【0038】

文字入力装置1の表示部5には、図17のようなソフトキーボード6が表示されている。使用者は、図18のように所望の文字をタッチして（すぐ離して）、文字を確定して入力する。

【0039】

一方、ソフトキーボード6に表示する文字種別を変更する場合には、使用者は、図19のようにポインティングデバイス3で任意の文字をタッチして一定時間経過したところでドラッグメニュー18が表示される。以下、文字種別を選択する方法は第1実施形態と同様であり、図20のように文字種別を変更して文字情報を表示することができる。

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【0040】

この発明の第3実施形態によれば、第1実施形態の効果に加えて、使用者は、ポインティングデバイス3によって文字を入力することと、ドラッグメニュー18を表示させることを明確且つ簡単にそして素速く行うことができる。

【0041】

第4実施形態

図21～23は、この発明の第4実施形態としての文字入力装置のソフトキーボードの表示例を示す図である。

図21～23の文字入力装置1は、第1実施形態と同様の構成をしており、そのソフトキーボード6のドラッグメニュー18の表示方法において第1実施形態と以下の点が異なる。

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【0042】

図21(A)のように表示されたソフトキーボード6において、使用者が、図21(B)のように所望の文字をタッチしてすぐ離すと、文字が選択されて入力される。

【0043】

ソフトキーボード6において表示されている文字種別を変更するためにドラッグメニュー18を表示させるには、図22(A)のように使用者がポインティングデバイス3を任意の文字(「う」)を指示して、そのまま図22(B)のように例えば「う」の領域を摺動させる(ドラッグさせる)と、図23のようにドラッグメニュー18が表示される。そして、このようにドラッグメニュー18を表示させて第1実施形態と同様にして表示中の文字の文字種別を変更する。尚、ポインティングデバイス3によってドラッグされる方向は、前述したものに限られずその逆であっても良いし、その領域内を摺動すればよい。

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【0044】

この発明の第4実施形態によれば、第3実施形態の効果と同様の効果を上げることができる。

【0045】

ところでこの発明は上述した実施形態に限定されるものではない。

上述した実施形態では、ドラッグメニュー18は、図24(A)のように略同一文字について一直線上に配列されているが、例えば図24(B)のように縦方向に配列させてもよい。また、ドラッグメニュー18は、図24(C)のように文字を文字種別単位に横に並べてさらに文字種別毎の文字を縦に配置させるような表示方法でも良い。このように配列することで、狭い範囲に文字を配列することができる。また、図24(D)のように文字種別単位に文字を縦に配列して、各文字種別単位を横方向に配置させるようにしても良い。このように配列することで、狭い範囲に文字を配列することができる。尚、上述したような文字入力機能を有するプログラム(ソフトキーボード6)は、例えばコンパクトディスクやフロッピーディスク(フレキシブルディスク)に格納されているような形態でも良いことはいうまでもない。

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【0046】

【発明の効果】

以上説明したように、この発明によれば、簡単且つ正確に文字入力を行うことができ、文

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字一覧表示手段の表示面積の小さな文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体を提供することができる。

【図面の簡単な説明】

【図 1】この発明の第 1 実施形態としての文字入力装置に対して文字を入力する様子を示す斜視図。

【図 2】図 1 の文字入力装置における制御回路の簡略化した構成例を示す構成図。

【図 3】図 1 のソフトキーボードの機能例を図示した機能ブロック図。

【図 4】図 3 のドラッグメニュー情報テーブルの内容を示す図。

【図 5】図 1 の文字入力装置における文字情報表示手段の詳細な動作例を示すフローチャート。

【図 6】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 7】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 8】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 9】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 10】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 11】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 12】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 13】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 14】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 15】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 16】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 17】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 18】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 19】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 20】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 21】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 22】図 21 のソフトキーボードの部分拡大図。

【図 23】ドラッグメニューが表示された様子を示す図。

【図 24】ドラッグメニューの表示の変形例を示す図。

【図 25】表示部に表示される従来のソフトキーボードの表示状態を示す図。

【図 26】表示部に表示される従来のソフトキーボードの表示状態を示す図。

【図 27】表示部に表示される従来のソフトキーボードの表示状態を示す図。

【符号の説明】

1・・・文字入力装置、3・・・ポインティングデバイス、5・・・表示部、6・・・ソフトキーボード（文字一覧表示手段、第 1 文字一覧表示手段）、7・・・タブレット、15・・・文字情報テーブル（文字情報格納手段）、16・・・行ドラッグメニュー（第 2 文字一覧表示手段）、17・・・ドラッグメニュー情報テーブル（文字情報格納手段）、18・・・ドラッグメニュー（文字種別表示手段）、19・・・文字情報表示手段

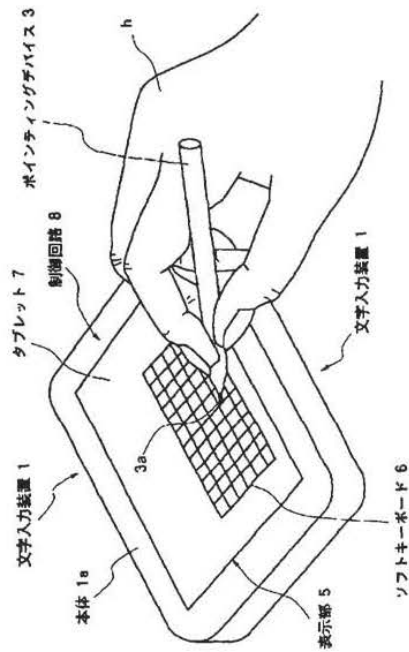
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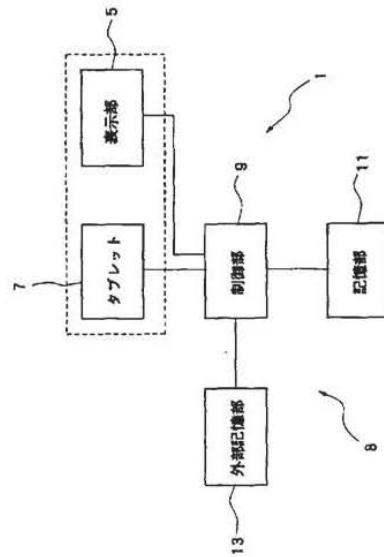
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40

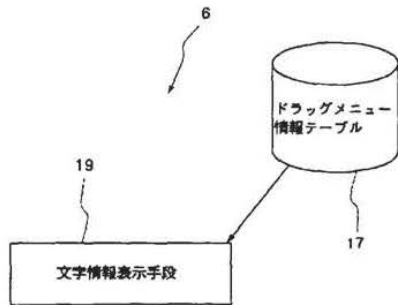
【図1】



【図2】



【図3】

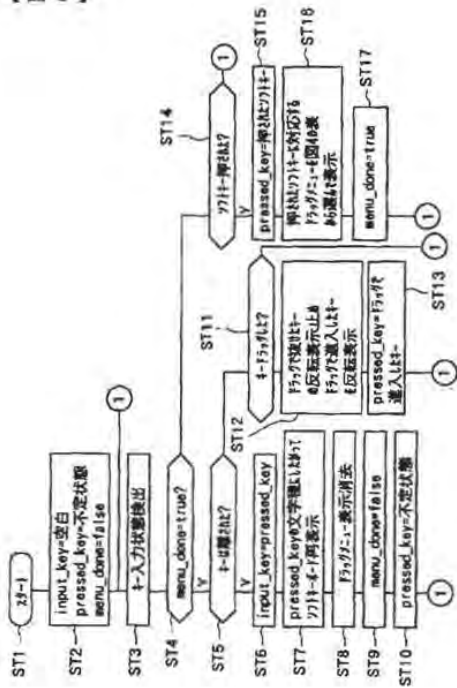


【図4】

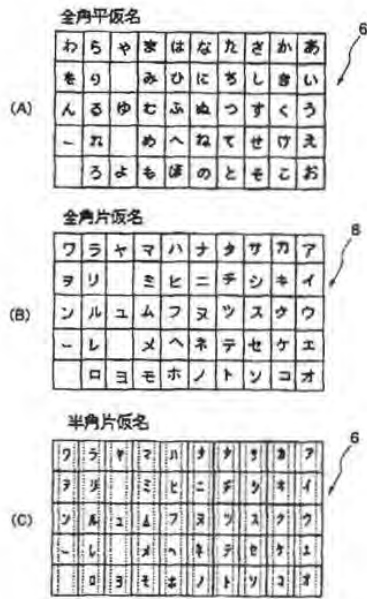
ドラッグメニュー情報テーブル

タッチされたキー	表示するドラッグメニューの選択数		
	全角平仮名	全角片仮名	半角片仮名
あア	ア	ア	ア
いイ	イ	イ	イ
うウ	ウ	ウ	ウ
えエ	エ	エ	エ
おオ	オ	オ	オ
かカ	カ	カ	カ
きキ	キ	キ	キ
くク	ク	ク	ク
けケ	ケ	ケ	ケ
こコ	コ	コ	コ
さサ	サ	サ	サ
しシ	シ	シ	シ
すス	ス	ス	ス
せセ	セ	セ	セ
そソ	ソ	ソ	ソ
たタ	タ	タ	タ
ちチ	チ	チ	チ
つツ	ツ	ツ	ツ
てテ	テ	テ	テ
とト	ト	ト	ト
なナ	ナ	ナ	ナ
にニ	ニ	ニ	ニ
ぬヌ	ヌ	ヌ	ヌ
のノ	ノ	ノ	ノ
はハ	ハ	ハ	ハ
ひヒ	ヒ	ヒ	ヒ
ふフ	フ	フ	フ
へヘ	ヘ	ヘ	ヘ
ほホ	ホ	ホ	ホ
まマ	マ	マ	マ
みミ	ミ	ミ	ミ
むム	ム	ム	ム
めメ	メ	メ	メ
もモ	モ	モ	モ
やヤ	ヤ	ヤ	ヤ
ゆユ	ユ	ユ	ユ
よヨ	ヨ	ヨ	ヨ
らラ	ラ	ラ	ラ
りリ	リ	リ	リ
るル	ル	ル	ル
れレ	レ	レ	レ
ろロ	ロ	ロ	ロ
わワ	ワ	ワ	ワ
をウ	ウ	ウ	ウ
んン	ン	ン	ン

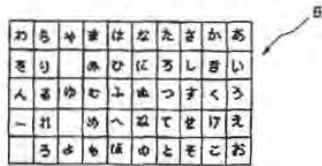
【図 5】



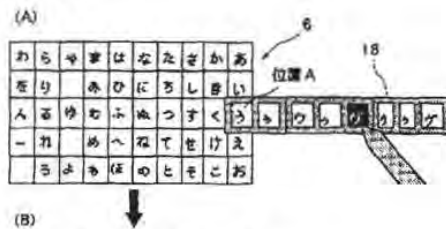
【図 6】



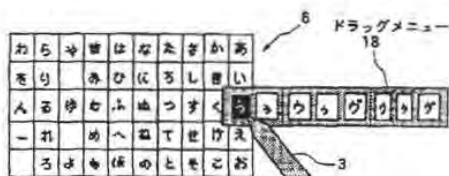
【図 7】



【図 9】



【図 8】



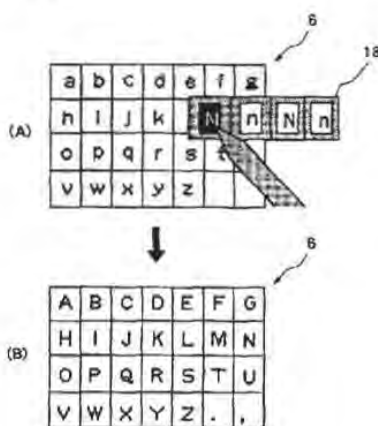
【図 10】



【図11】



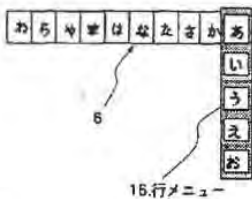
【図12】



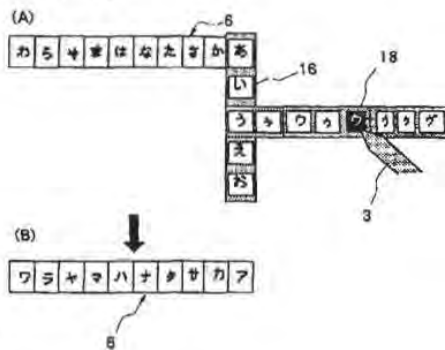
【図13】



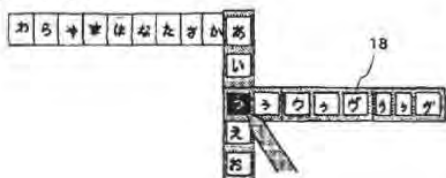
【図14】



【図16】



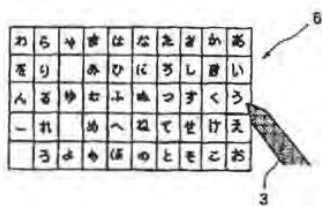
【図15】



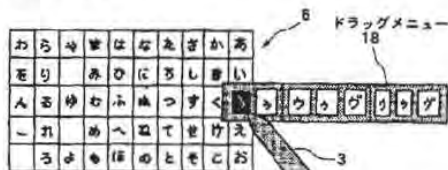
【図17】



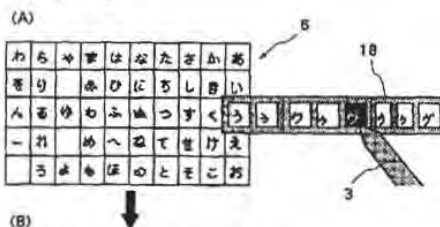
【図18】



【図19】



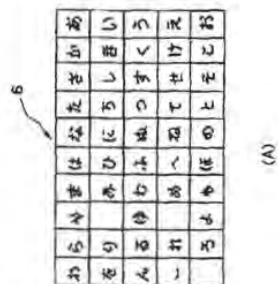
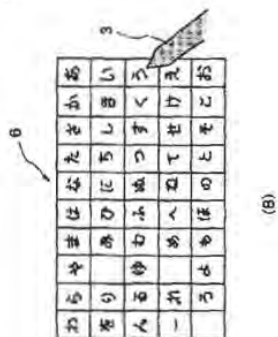
【図20】



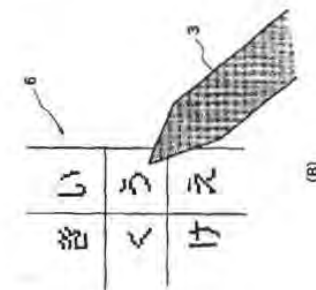
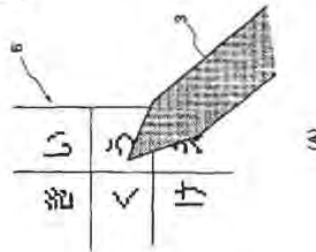
(B)



【図21】



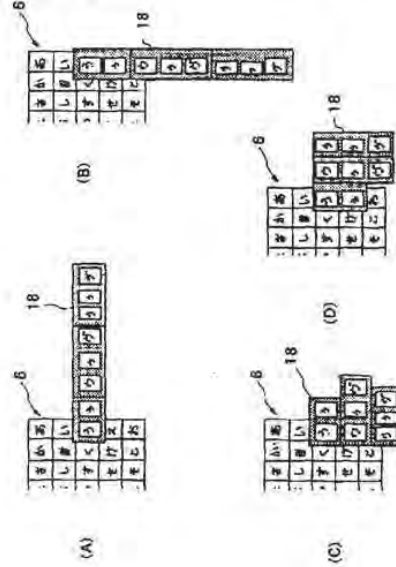
【図22】



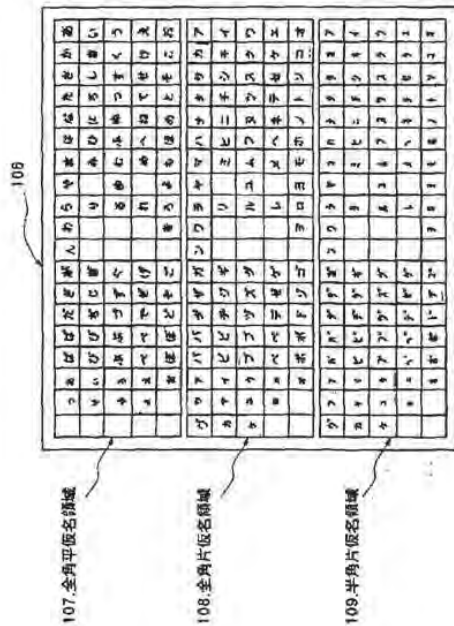
【図 23】



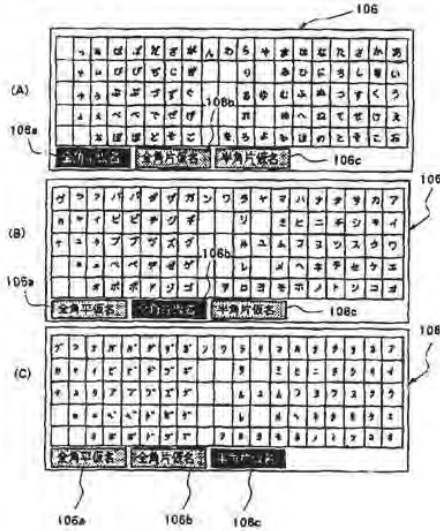
【図 24】



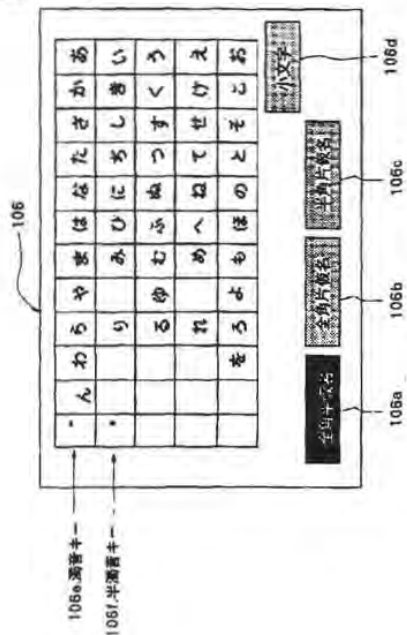
【図 25】



【図 26】



【図27】



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(58)調査した分野(Int.Cl., DB名)

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H03M 11/04-11/24

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G06F	3/023	(2006.01)	G06F	3/023	310L
H03M	11/04	(2006.01)	G06F	3/048	620
G06F	3/048	(2006.01)	G06F	3/041	330C
G06F	3/041	(2006.01)	G06F	17/22	502A
G06F	17/22	(2006.01)			

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審査請求日	平成17年2月28日(2005.2.28)

(73) 特許権者 000002185
ソニー株式会社
東京都港区港南1丁目7番1号

(74) 代理人 100094053
弁理士 佐藤 隆久

(72) 発明者 坂田 雅章
神奈川県横浜市保土ヶ谷区神戸町134番
地 ソニー・エルエスアイ・デザイン株式
会社内

審査官 篠塚 隆

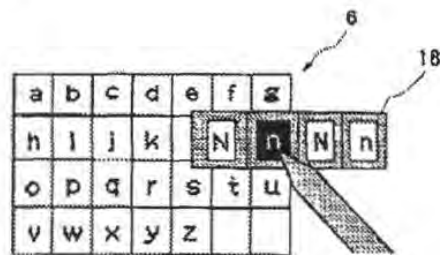
(56) 参考文献 特開平07-200123 (JP, A)
特開平09-081320 (JP, A)
特開平09-044285 (JP, A)
最終頁に続く

(54) 【発明の名称】 文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体

【図10】

a	b	c	d	e	f	g
h	i	j	k	l	m	n
o	p	q	r	s	t	u
v	w	x	y	z		

【図11】

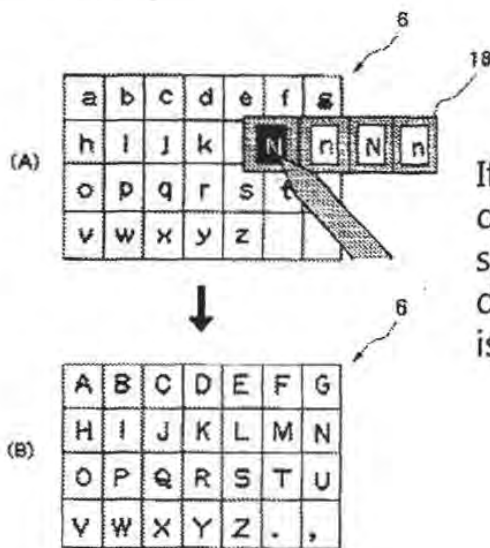


Actually the invention didn't disclose concept of 'pre-determined time'. However, it disclosed similar concept to select secondary character corresponding to one key button.

Figure 11 disclosed a example of the invention, if user select character 'n' in a keyboard display by using pen or his finger, then selectable other characters are displayed along with original character(in this case 'n').

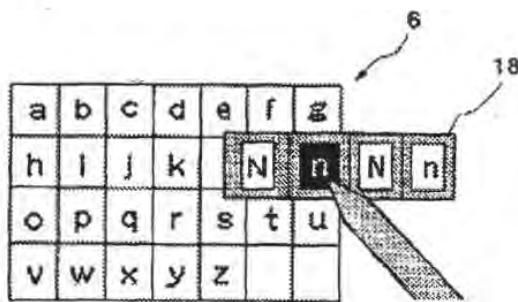
So, if user takes his pen off while selecting 'n' then original character(primary character) is selected.

【図12】



If user select other character while displaying selectable candidates, then selected character (secondary character) is displayed or corresponding new key board is displayed.

【圖 1 1】



When user selects one of the character of the keyboard, primary character is selected basically. And user has to move his pen to select secondary character.

The patent doesn't disclose timing concept, but selecting secondary character via primary character of keyboard is obvious in light of the invention.

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Tuesday, March 18 2014

THOMSON INNOVATION

Patent/Publication: JP04019512B2**Bibliography****DWPI Title**

Input of characters for text composition from soft keyboard over touch-type display avails several character sets requisitioned through separately displayed menu

Assignee/Applicant

Original: SONY CORP, JP

DWPI Assignee/Applicant

SONY CORP (SONY-C)

DWPI Inventor

SAKATA M

Publication Date (Kind Code)

2007-12-12 (B2)

DWPI Accession / Update

2000-241549 / 200801

Application Number / Date

JP1998227000A / 1998-08-11

Priority Number / Date / Country

JP1998227000A / 1998-08-11 / JP

Abstract**DWPI Abstract**

(JP2000056912A_)

Novelty

A character set (6) is presented over a touch-type display screen in a tabular form. Individual characters can be chosen through a stylus, manually from the array. By contacting one of a special subset of characters in the particular array, a separate menu (18) is brought forward onto the display, from which menu of a different character set (6B) can be generated.

Use

Portable computers come with specialized software/interfaces that accept manual inputs through a hand held stylus, for instance characters pertaining to Japanese language.

Advantage

It leads to accurate composition of text through an operationally simple procedure, accessing characters classified under specific formats.

Drawing Description

The figure shows the typical perspective view of character input unit.

18 - Menu.

6A, B - Tabular arrays of characters.

Classes/Indexing

IPC

Current IPC	Invention	Version	Additional	Version
Full	G06F 3/023	20060101		
	H03M 11/04	20060101		
	G06F 3/00	20060101	-	-
	G06F 3/041	20060101		
	G06F 3/048	20060101		
	G06F 17/22	20060101		
Main Group	-	-	-	-
Subclass	-	-	-	-

Original IPC	Invention	Version	Additional	Version
Advanced/Full	G06F 3/023	20060101		
	G06F 3/041	20060101		
	G06F 3/048	20060101	-	-
	G06F 17/22	20060101		
	H03M 11/04	20060101		
	Core/Main Group	G06F 3/023	20060101	
G06F 3/041		20060101		
G06F 3/048		20060101	-	-
G06F 17/22		20060101		
H03M 11/04		20060101		
Subclass	-	-	-	-

DWPI Manual Codes

 Expand DWPI Manual Codes

Legal Status

INPADOC Legal Status

Gazette Date	Code	Description
2010-10-05	LAPS -	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES
2007-10-11	FPAY +	RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE) PAYMENT UNTIL: 20101005

2007-10-05	FPAY +	RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE) PAYMENT UNTIL: 20101005
2007-10-04	A61 +	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE) JAPANESE INTERMEDIATE CODE: A61 2007-09-17
2007-09-05	A01 +	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL) JAPANESE INTERMEDIATE CODE: A01 2007-09-04
2007-08-29	TRDD +	DECISION OF GRANT OR REJECTION WRITTEN
2007-08-18	A521	WRITTEN AMENDMENT JAPANESE INTERMEDIATE CODE: A523 2007-08-17
2007-06-20	A131 -	NOTIFICATION OF REASONS FOR REFUSAL JAPANESE INTERMEDIATE CODE: A131 2007-06-19
2007-06-14	A977	REPORT ON RETRIEVAL JAPANESE INTERMEDIATE CODE: A971007 2007-06-14
2005-03-01	A621 +	WRITTEN REQUEST FOR APPLICATION EXAMINATION JAPANESE INTERMEDIATE CODE: A621 2005-02-28

Get Family Legal Status

Family

Family

 Expand INPADOC Family (2)

 Expand DWPI Family (2); Countries (1)

Claims

Claims

 Collapse All Claims (16)

Claims (English)

1. It is a character input device for instruct|indicating and inputting a desired character by the indication means for instruct|indicating the arbitrary characters of character information in the state which each displayed several character information comprised in the character applicable to a specific character classification on the display means,

Comprising:

A character-information storing means to store character information,

The character-information display means for displaying the character list display means for displaying character information as a list, and the character classification display means for displaying the character applicable to at least 1 character classification in the arbitrary characters of character information on a display means,

It has these,

The character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,

Indication means' instruction|indication of the arbitrary characters of the character list display means will display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,

If the character applicable to the arbitrary character classification of the character classification display means is instruct|indicated and released|separated by indication means, the character information applicable to the character classification of the character which was being displayed on the released|separated position will be displayed on a character list display means.

The character input device characterized by the above-mentioned.

2. Character classification is a combination of a unvoiced sound, a voiced sound, a semivoiced consonant sound, palatal sounds or assimilated obstruent sound, and a full-size hiragana, a half-width hiragana, full-size katakana or half-width katakana, when inputting a Japanese language, When inputting the language of other than that, they are a capital letter and a small letter.
The character input device of Claim 1.

3. The character for every character classification displayed on a character classification display means is each arranged the vertical direction, a horizontal direction, or in the shape of squares.
The character input device of Claim 1.

4. Indication means is the pointing device or mouse pointer instruct|indicated with respect to a tablet.
The character input device of Claim 1.

5. It is a character input device for instruct|indicating and inputting a desired character by the indication means for instruct|indicating the arbitrary characters of character information in the state which each displayed several character information comprised in the character applicable to a specific character classification on the display means,

Comprising:

A character-information storing means to store character information,

The character-information display means for displaying the 1st character list display means for displaying character information as a list, and the character classification display means for displaying the character applicable to at least 1 character classification in the arbitrary characters of character information on a display means,

It has these,

The 1st character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,

Indication means' instruction|indication of the arbitrary characters of the 1st character list display means will display a 2nd character list display means to represent character information more detailed than a 1st character list display means on a display means,

Indication means' instruction|indication of the arbitrary characters of the 2nd character list display means will display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,

If the character of the arbitrary character classification of the character classification display means is instruct|indicated by indication means and released|separated from the position, the character information applicable to the character classification currently displayed on the position released|separated in the character classification display means will be displayed on a 1st character list display means.

The character input device characterized by the above-mentioned.

6. It is a character input device for instruct|indicating and inputting a desired character by the indication means for instruct|indicating the arbitrary characters of character information in the state which each displayed several character information comprised in the character applicable to a specific character classification on the display means,

Comprising:

A character-information storing means to store character information,

The character-information display means for displaying the character list display means for displaying character information as a list, and the character classification display means for displaying the character applicable to at least 1 character classification in the arbitrary characters of character information on a display means,

It has these,

The character list display means for displaying several character information applicable to a specific character classification is displayed on a display means,

A character classification display means for the arbitrary characters of the character list display means displayed on the display means to display the character which corresponds to at least 1 other character classification corresponding to the pre-determined character instruct|indicated when a time instruction|indication continued being carried out by indication means is displayed on a display means,

The arbitrary characters of the character classification display means are instruct|indicated to slide a character classification display means by indication means,

If it releases|separates from the position, the character information applicable to the character classification of the character which was being displayed on the position released|separated in the character classification display means will be displayed on a character list display means.
The character input device characterized by the above-mentioned.

7. The character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,
Indication means' instruction|indication of the arbitrary characters of the character list display means will display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,
If the character applicable to the arbitrary character classification of the character classification display means is instruct|indicated and released|separated by indication means, the character information applicable to the character classification of the character which was being displayed on the released|separated position will be displayed on a character list display means.
The character input method characterized by the above-mentioned.

8. Character classification is a combination of a unvoiced sound, a voiced sound, a semivoiced consonant sound, palatal sounds or assimilated obstruent sound, and a full-size hiragana, a half-width hiragana, full-size katakana or half-width katakana, when inputting a Japanese language,
When inputting the language of other than that, they are a capital letter and a small letter.
The character input method of Claim 7.

9. The character for every character classification displayed on a character classification display means is each arranged the vertical direction, a horizontal direction, or in the shape of squares.
The character input method of Claim 7.

10. The 1st character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,
Indication means' instruction|indication of the arbitrary characters of the 1st character list display means will display a 2nd character list display means to represent character information more detailed than a 1st character list display means on a display means,
Indication means' instruction|indication of the arbitrary characters of the 2nd character list display means will display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,
If the character of the arbitrary character classification of the character classification display means is instruct|indicated by indication means and released|separated from the position, the character information applicable to the character classification currently displayed on the position released|separated in the character classification display means will be displayed on a 1st character list display means.
The character input method characterized by the above-mentioned.

11. The character list display means for displaying several character information applicable to a specific character classification is displayed on a display means,
A character classification display means for the arbitrary characters of the character list display means displayed on the display means to display the character which corresponds to at least 1 other character classification corresponding to the pre-determined character instruct|indicated when a time instruction|indication continued being carried out by indication means is displayed on a display means,
The arbitrary characters of the character classification display means are instruct|indicated to slide a character classification display means by indication means,
If it releases|separates from the position, the character information applicable to the character classification of the character which was being displayed on the position released|separated in the character classification display means will be displayed on a character list display means.
The character input method characterized by the above-mentioned.

12. The character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,
Indication means' instruction|indication of the arbitrary characters of the character list display means will

display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,
If the character applicable to the arbitrary character classification of the character classification display means is instruct|indicated and released|separated by indication means, the character information applicable to the character classification of the character which was being displayed on the released|separated position will be displayed on a character list display means.
The program which has a character inputting function was recorded.
The information recording medium characterized by these.

13. Character classification is a combination of a unvoiced sound, a voiced sound, a semivoiced consonant sound, palatal sounds or assimilated obstruent sound, and a full-size hiragana, a half-width hiragana, full-size katakana or half-width katakana, when inputting a Japanese language,
When inputting the language of other than that, they are a capital letter and a small letter.
The program which has a character inputting function was recorded.
The information recording medium of Claim 12.

14. The character for every character classification displayed on a character classification display means is each arranged the vertical direction, a horizontal direction, or in the shape of squares.
The program which has a character inputting function was recorded.
The information recording medium of Claim 12.

15. The 1st character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,
Indication means' instruction|indication of the arbitrary characters of the 1st character list display means will display a 2nd character list display means to represent character information more detailed than a 1st character list display means on a display means,
Indication means' instruction|indication of the arbitrary characters of the 2nd character list display means will display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,
If the character of the arbitrary character classification of the character classification display means is instruct|indicated by indication means and released|separated from the position, the character information applicable to the character classification currently displayed on the position released|separated in the character classification display means will be displayed on a 1st character list display means.
The program which has a character inputting function was recorded.
The information recording medium characterized by the above-mentioned.

16. The character list display means for displaying several character information applicable to a specific character classification is displayed on a display means,
A character classification display means for the arbitrary characters of the character list display means displayed on the display means to display the character which corresponds to at least 1 other character classification corresponding to the pre-determined character instruct|indicated when a time instruction|indication continued being carried out by indication means is displayed on a display means,
The arbitrary characters of the character classification display means are instruct|indicated to slide a character classification display means by indication means,
If it releases|separates from the position, the character information applicable to the character classification of the character which was being displayed on the position released|separated in the character classification display means will be displayed on a character list display means.
The program which has a character inputting function was recorded.
The information recording medium characterized by these.

(Translation from Thomson Reuters)

Description

DWPI Drawing Description

The figure shows the typical perspective view of character input unit.


18 - Menu.

6A, B - Tabular arrays of characters.

Drawing Description

 Collapse Drawing Description

Description

 Collapse Description

TECHNICAL FIELD of the Invention

This invention relates to the information recording medium which recorded the program which has the character input device, the character input method, and character inputting function for inputting a character.

PRIOR ART

In recent years, the use of various information is made by growth of the information industry. For example, work and individual information are managed, Furthermore, in order to utilize this information, the personal computer, the information personal digital assistant device (It omits below and calls an information-technology equipment), etc. are utilized, for example.

If the above-mentioned information-technology equipment is demonstrated as an example, As for this information-technology equipment, a user uses a predetermined pointing device, for example, It operates by the screen displayed by the predetermined software incorporated in the display part provided in the information-technology equipment being operated.

The user interface normally called GUI(Graphical User Interface) is employ|adopted and such a screen is tending to operate [come] a user.

While such an information-technology equipment improves performance, competition which achieves downsizing|reduced-size so that it may be easy to carry an individual is performed.

Thus, if an information-technology equipment is downsize|size-reduced, naturally the display surface product of a display part will become small.

Therefore, the display material displayed on a display part by a predetermined software becomes small, and there exists a fault that the operativity of GUI falls.

A soft keyboard is concretely demonstrated about the fault as an example as what is displayed on the following, for example, a display part.

In addition, a "soft keyboard" shall mean the software which has a keyboard function in which a character can be inputted into an information-technology equipment.

PROBLEM to be solved by the Invention

FIGS. 25-27 is a figure which shows the displaying condition of the conventional soft keyboard each displayed on a display part.

In FIG. 25, a soft keyboard 106 has the full-size hiragana display area|region 107, the full-size katakana

display area|region 108, and the half-width katakana display area|region 109, for example. Therefore, if a soft keyboard 106 is displayed on the small display part of a display surface product, requiring a big display surface product by character classification like that each character is hard to try to become small, a hiragana, katakana, full width, and half width will produce it.

In FIG. 26 (A)-(C), a soft keyboard 106 is made to display the character information of several character classification as one screen, in order to remove the fault of FIG. 25.

Therefore, a soft keyboard 106 has the full-size hiragana button 106a, the full-size katakana button 106b, and the half-width katakana button 106c, for example in addition to the display area|region for displaying character information.

In the soft keyboard 106 of FIG. 26 (A)-(C), although the full-size hiragana, the full-size katakana, and the half-width katakana as a character classification are distinguished and character information is displayed, a user needs to operate each button.

In FIG. 27, in order that a soft keyboard 106 may make small.the area of the display area|region of the character information of FIG. 26 (A)-(C), a voiced consonant mark and a semivoiced consonant mark are added,

Or the input part (It is each the voiced-sound key 106e and the semivoiced-consonant-sound key 106f, or the small letter button 106b of FIG. 27.) for indicating a small letter display or a small letter display to a capital letter display by a capital letter in the soft keyboard which can input a Roman alphabet etc., for example is provided.

In such a soft keyboard 106, an operator has to switch to the character information of desired character classification one by one.

Then, this invention eliminates the said subject,

A character input can be performed easily and correctly and it aims at providing the information recording medium which recorded the program which has the small character input device, the character input method, and character inputting function of a display surface product of a character list display means.

MEANS to solve the Problem

The said objective is the state which each displayed several character information comprised in the character applicable to a specific character classification in this invention on the display means, and it is a character input device for instruct|indicating and inputting a desired character by the indication means for instruct|indicating the arbitrary characters of character information,

Comprising:

A character-information storing means to store character information,

The character-information display means for displaying the character list display means for displaying character information as a list, and the character classification display means for displaying the character applicable to at least 1 character classification in the arbitrary characters of character information on a display means,

It has these,

The character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means,

Indication means' instruction|indication of the arbitrary characters of the character list display means will display the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the instruct|indicated character on a display means,

If the character applicable to the arbitrary character classification of the character classification display means is instruct|indicated and released|separated by indication means, the character information applicable to the character classification of the character which was being displayed on the released|separated position will be displayed on a character list display means,

It is achieved by the character input device characterized by the above-mentioned.

In this invention, the character list display means for displaying several character information comprised in the character applicable to a specific character classification is displayed on a display means.

A user instruct|indicates the arbitrary characters of a character list display means by indication means.

Then, the character classification display means for displaying the character applicable to at least 1 other character classification corresponding to the character instruct|indicated by indication means is displayed on a display means.

A user instruct|indicates the desired character of a character classification display means by indication means, and releases|separates indication means.

Thereby, the character information applicable to the character classification of the character currently displayed on the position released|separated in the character classification display means is displayed on a display means.

EMBODIMENT of the Invention

Hereafter, the preferred embodiment of this invention is demonstrated in detail based on an accompanying drawing.

In addition, Embodiment described below is a suitable example of this invention,

Therefore

Preferable various limitation is attached technically,

However,

The range in particular of this invention is not restricted to these forms, as long as there is no description to the effect of limiting this invention in the following description.

During the following description, "character classification" shows the combination of a direct sound, a voiced sound, a semivoiced consonant sound, palatal sounds, assimilated obstruent sound, a usual special character, a hiragana, katakana, these and full width, and half width, when inputting a Japanese language,

In inputting the language (For example, English etc.) of other than that, it shows a capital letter and a small letter.

"Character information" shows several characters for every character classification.

In order to carry out a character input in an information-technology equipment by the following description, a keyboard is displayed by a software,

However,

"KI" shall show a displaying-with software applicable to key of normal keyboard key (softkey).

1st Embodiment

FIG. 1 is a perspective view which shows a mode that a character is inputted with respect to the character input device as 1st Embodiment of this invention.

The character input device 1 is an information-technology equipment for managing portable information, for example.

The character input device 1 has the display part 5 (display means) provided between the tablet 7 and the main body 1a so that it might contact|adhere to the tablet 7 (indication means) provided in the 1 surface of the main body 1a as a housing, and the main body 1a, and a tablet 7.

The said display part 5 is a liquid crystal display, for example,

Soft keyboard 6 (The character list display means as a part of program which has a character inputting function) as a character input software mentioned later is displayed.

The said main body 1a has a control circuit 8 like FIG. 2 later mentioned to the inside.

FIG. 2 is a block diagram which shows the example of a structure which the control circuit in the character input device of FIG. 1 simplified.

The control circuit 8 has the control part 9, the storage part 11, the external storage part 13, a tablet 7 (indication means), and the display part 5 (display means).

In addition, a structure which is equipped what is called with a mouse|mouth as a pointing device of the display part 5 etc. may be sufficient as the control circuit 8 instead of a tablet 7.

The said control part 9 is CPU (central processing unit), for example.

The control part 9 is connected with the storage part 11, the external storage part 13, the tablet 7, and the display part 5.

The control part 9 is controlling the character input-device 1 whole based on the information recorded on the recording part 11.

The said storage parts 11 are RAM(Random Access Memory) and ROM(Read Only Memory), for example. The storage part 11 is workspace for soft keyboard 6 (And operating system etc.) to operate/move.

The said external storage part 13 is a hard disk, for example.

The external storage part 13 stores the soft keyboard 6 mentioned above.

If a soft keyboard 6 is started, it will be operate/moved on the storage part 11, for example by the control part 9.

The description about a soft keyboard 6 is mentioned later.

The said tablet 7 is a touch panel of a pen touch type/mold, for example.

A user touches the predetermined position of a tablet 7 with this tablet 7 with the pointing device 3 (indication means) which carried out the shape where it was pen type and the destination sharpened, When the resistance layer of about two layers of upper and lower sides contacts, the voltage produced in a predetermined electrode changes,

The control part 9 of FIG. 2 mentioned later is an input device which recognizes the position.

A tablet 7 is a transparent member,

The display part 5 is arrange/positioned at the lower layer.

Thereby, the user can visually recognize the display of the display part 5 now via the transparent tablet 7.

FIG. 3 is a functional block diagram illustrating the functional example of the soft keyboard of FIG. 1.

A soft keyboard 6 has the drag|drug menu information table 17 (character-information storing means) and the character-information display means 19.

It shall say a "drag|drug" being the state in which the user made the front-end|tip 3a of the pointing device 3 contact soft keyboard 6 grade|etc., displayed on the display part 5, for example, and sliding the surface top of a tablet 7 by the following description.

The said drag|drug menu information table 17 stores the character for every character classification, for example.

The information (henceforth drag|drug menu information) for the drag|drug menu information table 17 to display the drag|drug menu 18 when a drag|drug menu 18 (character classification display means) like FIG. 8 is displayed by character-information display means 19 to mention later is read.

As an example of drag|drug menu information, it is a format like FIG. 4.

That is, the character for every character classification corresponding to the key pressed in the soft keyboard 6 at the time of touch (Hereafter, it says having pointed to the soft keyboard 6 with the pointing device 3.) of the tablet 7 being carried out is stored.

The said character-information display means 19 is a software which uses the storage part 11 as workspace, for example by control of the control part 9 of FIG. 2.

When the character-information display means 19 displays a soft keyboard 6 on the display part 5 of FIG. 1, it searches the drag|drug menu information table 17,

For example, character information is displayed for every character classification like FIG. 6 (A)-(C).

As for the character-information display means 19, a user touches a tablet 7 in the state (FIG. 7) as which the soft keyboard 6 was displayed on the display part 5 (this position is called the 1st position A).

For example, when displaying a drag|drug menu 18 like FIG. 8, the drag|drug menu information table 17 is searched and drag|drug menu information is displayed.

The character-information display means 19 displays a screen like FIG. 8 as a drag|drug menu 18 on the display part 5.

This drag|drug menu 18 displays the character applicable to all the character classification which searches the drag|drug menu information table 17 of FIG. 4, and corresponds based on the character touched with the pointing device 3.

Drag|drug menu 18,

Preferably the drag|drug menu information table 17 of FIG. 4 is searched,

It is good to divide into each character classification (selection branch of the drag|drug menu which FIG. 4 displays) of every per some characters like FIG. 8.

This is for being easy to recognize the character for every character classification, when a user uses a soft keyboard 6.

Although the example of a structure of the character input device was demonstrated above, the operation|movement is demonstrated below.

FIG. 5 is a flowchart which shows the detailed operation example of the character-information display means in the character input device of FIG. 1.

By the following description, a soft keyboard 6 demonstrates from the state (The state as which the soft keyboard 6 of FIG. 7 was displayed on the display part 5 of FIG. 1) already started in the character input device 1.

In FIG. 5, "=" is meaning substituting the variable of a right side to the variable of a left side rather than means equal sign.

"==" means comparing a left side and a right side.

Moreover, there exist the following as a variable used on the storage part 11 of FIG. 2 which comes into play during description.

Input_key variable : Definite input sentence character

Pressed_key variable: The pressed key

Menu_done variable : Flag showing in process of a drag|drug menu display

It is made (step ST1) and an input_key variable at a blank space in the state as which the soft keyboard 6 was displayed,

Let a pressed_key variable be an unfixed state,

False(It shows that the drag|drug menu 18 is non-display, and represents that the drag|drug menu 18 displays true.) is substituted to a menu_done variable (step ST2).

The control part 9 of FIG. 2 detects the state of whether to have been touched [user] in the key by the pointing device 3.

It is confirmed whether it was touched by the user in the key and the drag|drug menu 18 was displayed (step ST4).

If the drag|drug menu 18 is not displayed, it is judged whether the key (softkey) was pressed (step ST14).

If it does not push and returns and pushes on step ST3, the key (corresponding code|cord) pushed on the press_key variable will be substituted (step ST15), and the drag|drug menu information table 17 of FIG. 4 will be searched based on this press_key variable,

The drag|drug menu 18 showing an applicable character is displayed (step ST16).

And true is substituted to a menu_done variable (step ST17), and the character instruct|indicated by the pointing device 3 is reversed.

If the drag|drug menu 18 is displayed, it will be detected whether the user released|separated the pointing device 3 from the key (step ST5).

If it is not detecting and (step ST11) dragging whether the pointing device 3 dragged if it did not release|separate and is returning and dragging to step ST3, reversing display of the key from which it passed-through|fell-off by a drag|drug will be stopped,

The key which shows the area|region which approached by a drag|drug with a pointing device 3 is reverse-displayed (step ST12).

And the key (for example, character code) which approached is substituted to a pressed_key variable (step ST13).

And it progresses to step ST3.

If it releases|separates, a pressed_key variable will be substituted to an input_key variable (that is, information of the pressed key substitution).

According to the character classification (character seed|species) of (For example, it corresponds to a character code) character stored in the pressed_key variable, a soft keyboard 6 is re-displayed like either of the FIG. 6 (A)-(C) (step ST7).

And simultaneously, drag|drug menu 18 display is erase|eliminated (step ST8), and false is substituted to a menu_done variable (step ST9).

A pressed_key variable is made into an unfixed state (step ST10), and returns to step ST3.

The above demonstrates the internal processing of character-information display means 19 grade|etc.,

in detail,

Next, operation|movement of the character input device 1 at the time of seeing from the user side is demonstrated.

A user is using the software which inputs a character.

The user is going to input desired character ("U" or "ウ") with the pointing device 3 like FIG. 8.

However,

The character information of the character classification of a full-size hiragana is displayed on the character input device 1,

Therefore

A user touches "U" with a pointing device 3, in order to change a character classification on display.

As for a soft keyboard 6, the drag|drug menu 18 is displayed like FIG. 8 from the state of FIG. 7.

When a user touches the arbitrary characters of the drag|drug menu 18 with a pointing device 3 like FIG. 9 (A), (For example, drag the drag|drug menu 18 for a pointing device 3 from the 1st position A.),

The character information currently displayed on the soft keyboard 6 is changed into the character information which corresponds to the character classification of the character like FIG.9(B).

In addition, what is necessary is just to touch parts other than drag|drug menu 18 to eliminate|eradicate the drag|drug menu 18 like FIG. 7.

On the other hand, when a user tries to input an English character with the character input device 1

In the state (The state as which "character information" was displayed is shown in this description.) as which the soft keyboard 6 was displayed like FIG. 10, if "n" as a character which it is going to input is touched with a pointing device 3, the drag|drug menu 18 will be displayed like FIG. 11.

In addition, it displays as the drag|drug menu 18 of FIG. 11 from the left in order of full width "N", "n", half width "N", and "n."

This order of a display is order stored, for example in the drag|drug menu information table 17 of FIG. 4. (In FIG. 4, since it is an example, only the Japanese character is stored.).

A user is going to input "N" of full width like FIG. 12 (A), and touches "N" of the drag|drug menu 18.

Character classification becomes a display of full width like FIG.12(B) in a soft keyboard 6.

According to 1st Embodiment of this invention, the switching means (For example, button etc.) for switching the character classification required the part which can input a character with respect to the character input device 1 easily and correctly, and does not display character information for every character classification, and conventionally is unnecessary,

Being able to make small conventionally the display surface product of a soft keyboard 6, the operativity of GUI(Graphical User Interface) is good, and especially when especially the display area|region of the display part 5 is decided, it is effective.

2nd Embodiment

FIGS. 13-16 is a figure which shows the example of a display of the soft keyboard of the character input device as 2nd Embodiment of this invention.

The character input device 1 of FIGS. 13-16 is carrying out the same structure as 1st Embodiment,

The following points differ in the Japanese-language display method of the soft keyboard 6.

As for the display (1st character list display means) of the soft keyboard 6, only the head character of the Japanese kana syllabary is displayed like "A" and "KA" *** and "WA", for example like FIG. 13.

A user touches the head character of a desired character with a pointing device 3, and displays line drag|drug menu 16 (The 2nd character list display means abbreviated to the line menu 16 below) like FIG. 14.

A user touches the character of the same character classification as a desired character, and displays the drag|drug menu 18 like FIG. 15.

A user slides the drag|drug menu 18 for a pointing device 3 like FIG. 16 (A),

If the character ("ウ") of desired character classification (katakana of full width) is touched with a pointing device 3, character classification will be changed into the katakana of full width like FIG.16(B).

According to 2nd Embodiment of this invention, in addition to the effect of 1st Embodiment, the display area|region of a soft keyboard 6 can be further made smaller than 1st Embodiment.

3rd Embodiment

FIGS. 17-20 is a figure which shows the example of a display of the soft keyboard of the character input device as 3rd Embodiment of this invention.

The character input device 1 of FIGS. 17-20 is carrying out the same structure as 1st Embodiment, The following points differ in the display method of the drag|drug menu 18 of the soft keyboard 6.

A soft keyboard 6 like FIG. 17 is displayed on the display part 5 of the character input device 1.

A user touches a desired character like FIG. 18 (releasing|separating immediately), and decides and inputs a character.

On the other hand, when changing the character classification displayed on a soft keyboard 6, as for a user, the drag|drug menu 18 is displayed in the place which touched arbitrary characters and passed for a fixed time with the pointing device 3 like FIG. 19.

The method to select character classification hereafter is the same as that of 1st Embodiment, Character classification can be changed like FIG. 20 and character information can be displayed.

Clear in that a user inputs a character with a pointing device 3 in addition to the effect of 1st Embodiment, and displaying the drag|drug menu 18 according to 3rd Embodiment of this invention -- and it can carry out easily and quick.

4th Embodiment

FIGS. 21-23 is a figure which shows the example of a display of the soft keyboard of the character input device as 4th Embodiment of this invention.

The character input device 1 of FIGS. 21-23 is carrying out the same structure as 1st Embodiment, In the display method of the drag|drug menu 18 of the soft keyboard 6, 1st Embodiment differs from the following points.

In the soft keyboard 6 displayed like FIG. 21 (A), if a user touches a desired character like FIG.21(B) and releases|separates immediately, a character will be selected and inputted.

In order to change the character classification currently displayed in the soft keyboard 6 and to display the drag|drug menu 18, a user instruct|indicates arbitrary characters ("U") for a pointing device 3 like FIG. 22 (A),

The area|region of "U" is then slid like FIG.22(B) -- making (it being made to drag) -- the drag|drug menu 18 is displayed like FIG. 23.

And the drag|drug menu 18 is displayed in this way, and the character classification of a character on display is changed like 1st Embodiment.

In addition, the direction dragged by a pointing device 3 is not restricted to what was mentioned above, but the contrary may be sufficient as it and it should just slide the inside of the area|region.

According to 4th Embodiment of this invention, the effect of 3rd Embodiment and the same effect can be raised.

By the way, this invention is not limited to Embodiment mentioned above.

In Embodiment mentioned above, the drag|drug menu 18 is arranged on the straight line about the substantially identical character like FIG. 24 (A),

For example, you may make it arrange in the vertical direction like FIG.24(B).

Moreover, the display method that the character for every character classification is horizontally arrange|positioned further perpendicularly [character] per character classification like FIG.24(C) may be sufficient as the drag|drug menu 18.

By arranging in this way, a character can be arranged in the narrow range.

Moreover, a character is perpendicularly arranged per character classification like FIG. 24 (D),

You may make it arrange|position each character classification unit transversely.

By arranging in this way, a character can be arranged in the narrow range.

In addition, it cannot be overemphasized that a form which is stored, for example in the compact disk or the floppy disk (flexible disc) may be sufficient as the program (soft keyboard 6) which has the above-mentioned character inputting function.

ADVANTAGE of the Invention

As explained above, according to this invention, a character input can be performed easily and correctly and the information recording medium which recorded the program which has the small character input device, the character input method, and character inputting function of a display surface product of a character list display means can be provided.

BRIEF DESCRIPTION OF THE DRAWINGS

[FIG. 1]

The perspective view which shows a mode that a character is inputted with respect to the character input device as 1st Embodiment of this invention.

[FIG. 2]

The block diagram which shows the example of a structure which the control circuit in the character input device of FIG. 1 simplified.

[FIG. 3]

The functional block diagram illustrating the functional example of the soft keyboard of FIG. 1.

[FIG. 4]

The figure which shows the content of the drag|drug menu information table of FIG. 3.

[FIG. 5]

The flowchart which shows the detailed operation example of the character-information display means in the character input device of FIG. 1.

[FIG. 6]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 7]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 8]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 9]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 10]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 11]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 12]

The figure which shows the example of a display of the soft keyboard displayed on the display part of FIG. 1.

[FIG. 13]

The figure which shows the example of a display of the soft keyboard of the character input device as 2nd Embodiment of this invention.

[FIG. 14]

The figure which shows the example of a display of the soft keyboard of the character input device as 2nd Embodiment of this invention.

[FIG. 15]

The figure which shows the example of a display of the soft keyboard of the character input device as 2nd Embodiment of this invention.

[FIG. 16]

The figure which shows the example of a display of the soft keyboard of the character input device as 2nd Embodiment of this invention.

[FIG. 17]

The figure which shows the example of a display of the soft keyboard of the character input device as

1/6

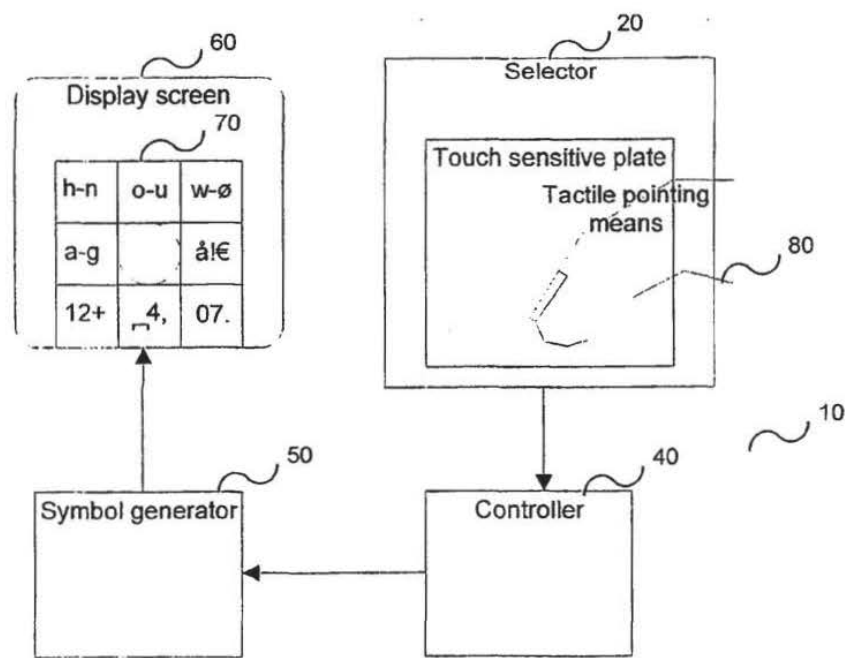


Fig. 1

3/6

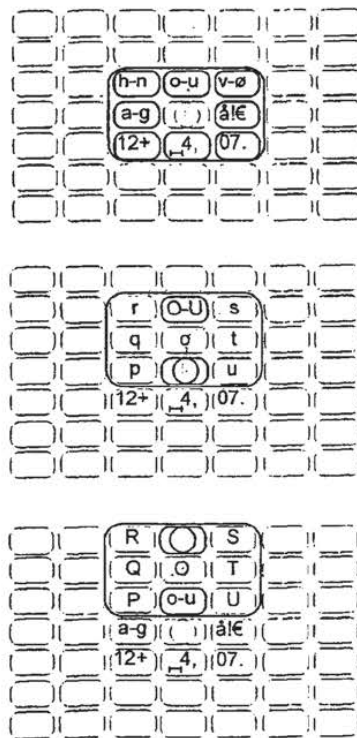


Fig. 3

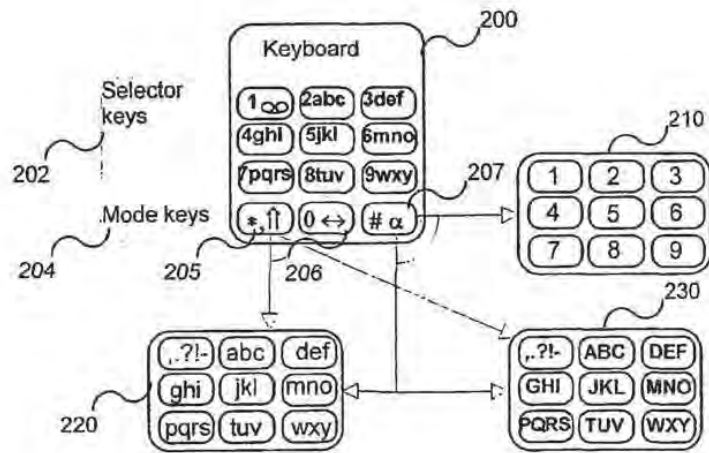


Fig. 4a

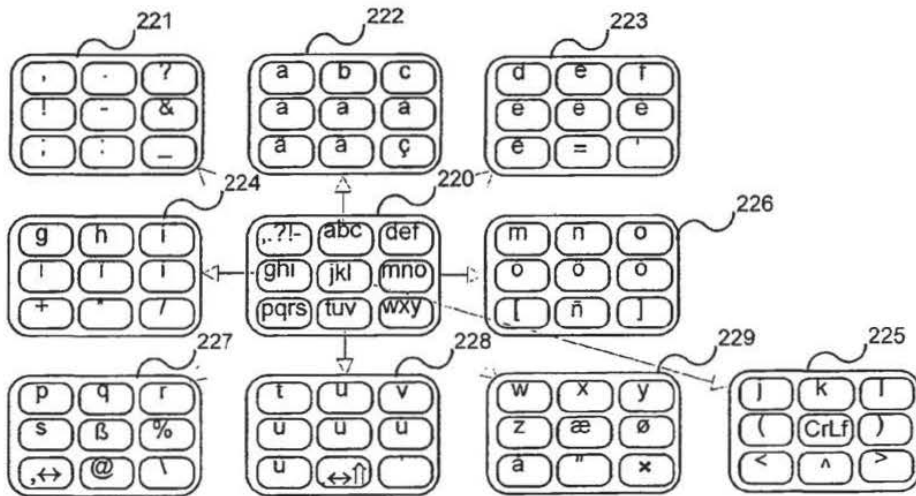


Fig. 4b

6/6

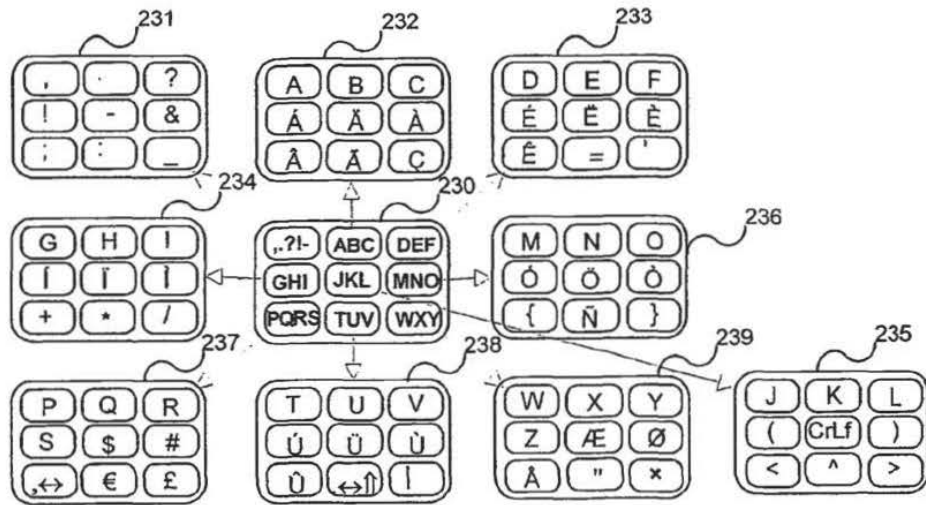


Fig. 4c

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		TEXT ENTRY METHOD AND DEVICE THEREFOR		
First Named Inventor/Applicant Name:		Matthew J. Bickerton		
Filer:		Michael E. Belk/Elissa DeLuccy		
Attorney Docket Number:		2001P00413US01		
Filed as Large Entity				
Reissue (Utility) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility Reissue Basic	1014	1	280	280
Design and Utility Reissue Basic	1114	1	600	600
Design and utility Reissue Basic	1314	1	2160	2160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				3040

Electronic Acknowledgement Receipt

EFS ID:	16464743
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Michael E. Belk/Elissa DeLuccy
Filer Authorized By:	Michael E. Belk
Attorney Docket Number:	2001P00413US01
Receipt Date:	31-JUL-2013
Filing Date:	
Time Stamp:	13:59:11
Application Type:	Reissue (Utility)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 3040
RAM confirmation Number	276
Deposit Account	141270
Authorized User	

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

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Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

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 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	2001P00413US01_ADS.pdf	967808 db7e1ae1d1a14ee9512555621c5c6abdb40a75c	no	4
Warnings:					
Information:					
2	Specification	2001P00413US_Patent_US6885318B2.pdf	473633 f946ee8eade952cd5b109b627c52fbc640233f8	no	11
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73.	2001P00413US01_373_Statement.pdf	395640 6174f148f0e029767880c90297f505d9c41c3	no	2
Warnings:					
Information:					
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7		2001P00413US01_PrelimAmd.pdf	2126705 d77596f222f11ab568eb9db43b85c8b8ce8e0126	yes	16
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Document Description			Start	End	
Preliminary Amendment			1	1	
Specification			2	2	

	Claims		3		8
	Applicant Arguments/Remarks Made in an Amendment		9		16
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Information:					
8	Information Disclosure Statement (IDS) Form (SB08)	2001P00413US01_IDS_2013_July_25.pdf	612949 92cd08a945a3ed636560459f494d14b87353e29e	no	5
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9	Foreign Reference	EP0889388A1.pdf	2545987 46bc13a9ab0cf1336cad35e909585cbe8ba69fb6	no	28
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Warnings:					
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Total Files Size (in bytes):			15144568		

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New International Application Filed with the USPTO as a Receiving Office

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	2001P00413US01
		Application Number	
Title of Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR		
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.)

Applicant Information:

Applicant 1					<input type="button" value="Remove"/>
Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
				<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Matthew	J.	Bickerton		
Residence Information (Select One)					
<input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Bletchingley	Country Of Residenceⁱ	GB		
Citizenship under 37 CFR 1.41(b)ⁱ	GB				
Mailing Address of Applicant:					
Address 1	High Tech Campus				
Address 2	Building 44				
City	Eindhoven	State/Province			
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<input type="checkbox"/> An Address is being provided for the correspondence information of this application.	
Customer Number	24737
Email Address	<input type="button" value="Add Email"/> <input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR		
Attorney Docket Number	2001P00413US01	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	2001P00413US01
	Application Number	
Title of Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR	

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.

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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(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	reissued of	10/156409	2002-05-28	6885318	2005-04-26

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the [Add](#) button.

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Remove			
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
0116083.7	GB	2001-06-30	<input checked="" type="radio"/> Yes <input type="radio"/> No

Additional Foreign Priority Data may be generated within this form by selecting the [Add](#) button.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	2001P00413US01	
		Application Number		
Title of Invention	TEXT ENTRY METHOD AND DEVICE THEREFOR			
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>				
Organization Name	KONINKLIJKE PHILIPS ELECTRONICS N.V.			
Mailing Address Information:				
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Address 2				
City	EINDHOVEN	State/Province		
Country	NL	Postal Code	5656 AE	
Phone Number			Fax Number	
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Additional Assignee Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

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A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.				
Signature	/Michael E. Belk/		Date (YYYY-MM-DD)	2013-07-25
First Name	Michael E.	Last Name	Belk	Registration Number
				33357

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US006885318B2

(12) **United States Patent**
Bickerton

(10) **Patent No.:** **US 6,885,318 B2**
(45) **Date of Patent:** **Apr. 26, 2005**

(54) **TEXT ENTRY METHOD AND DEVICE THEREFOR**

(75) **Inventor:** **Matthew J. Bickerton**, Bletchingley (GB)

(73) **Assignee:** **Koninklijke Philips Electronics N.V.**, Eindhoven (NL)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 507 days.

(21) **Appl. No.:** **10/156,409**

(22) **Filed:** **May 28, 2002**

(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

Jun. 30, 2001 (GB) 0116083

(51) **Int. Cl.**⁷ **H03K 17/94; H03M 11/00**

(52) **U.S. Cl.** **341/22; 345/168; 379/368; 400/486**

(58) **Field of Search** **341/22; 379/368, 379/906; 400/477, 486; 345/168**

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* cited by examiner

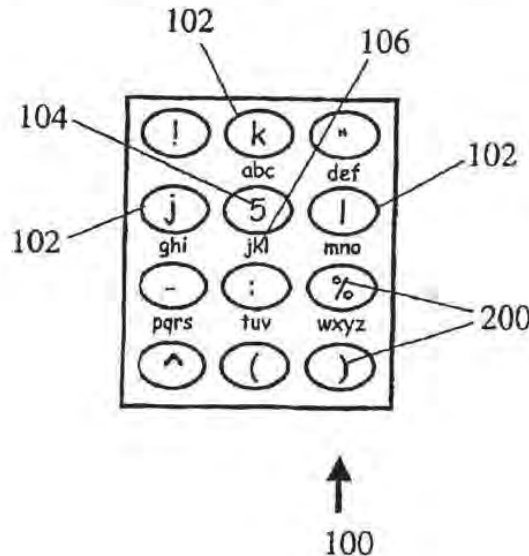
Primary Examiner—Timothy Edwards, Jr.

(74) *Attorney, Agent, or Firm*—Gregory L. Thorne

(57) **ABSTRACT**

A method and device for improved character input are described, wherein the method employs a keypad 100 comprising keys 102 able to display secondary characters 106 in addition to primary characters 104. The keypad has a default display state. A first key selection causes the keypad 100 to display secondary characters 106 associated with the first key on other keys 102, whereupon a second key selection causes the displayed character to be input, following which the keypad reverts to displaying the default state. Further secondary characters 200 may also be displayed after a first key selection. The method is particularly useful for handheld devices such as mobile radio telephones or handheld computers adapted to implement the method of the invention.

7 Claims, 6 Drawing Sheets



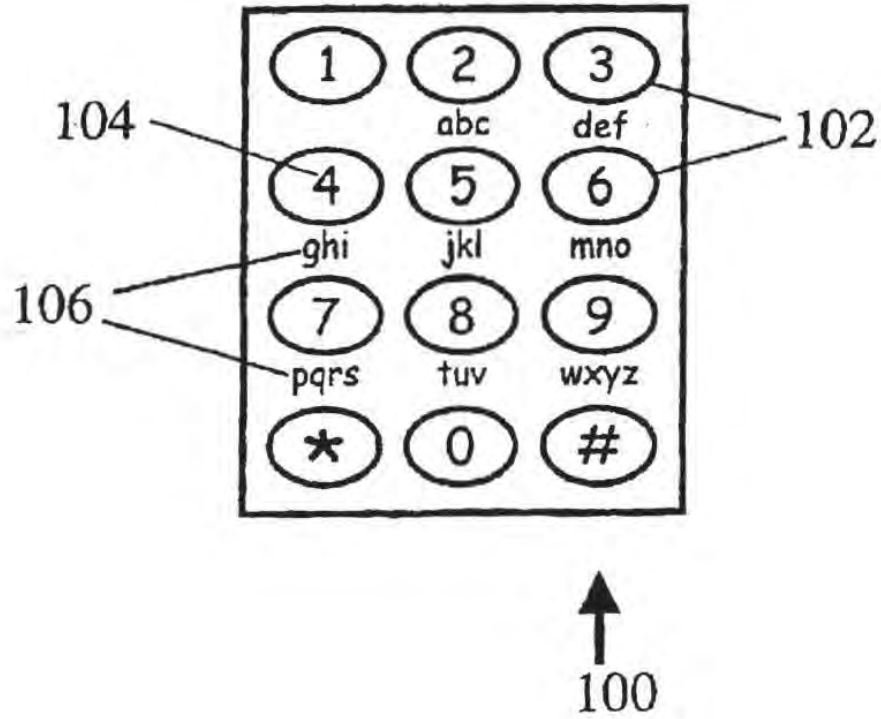


Fig. 1

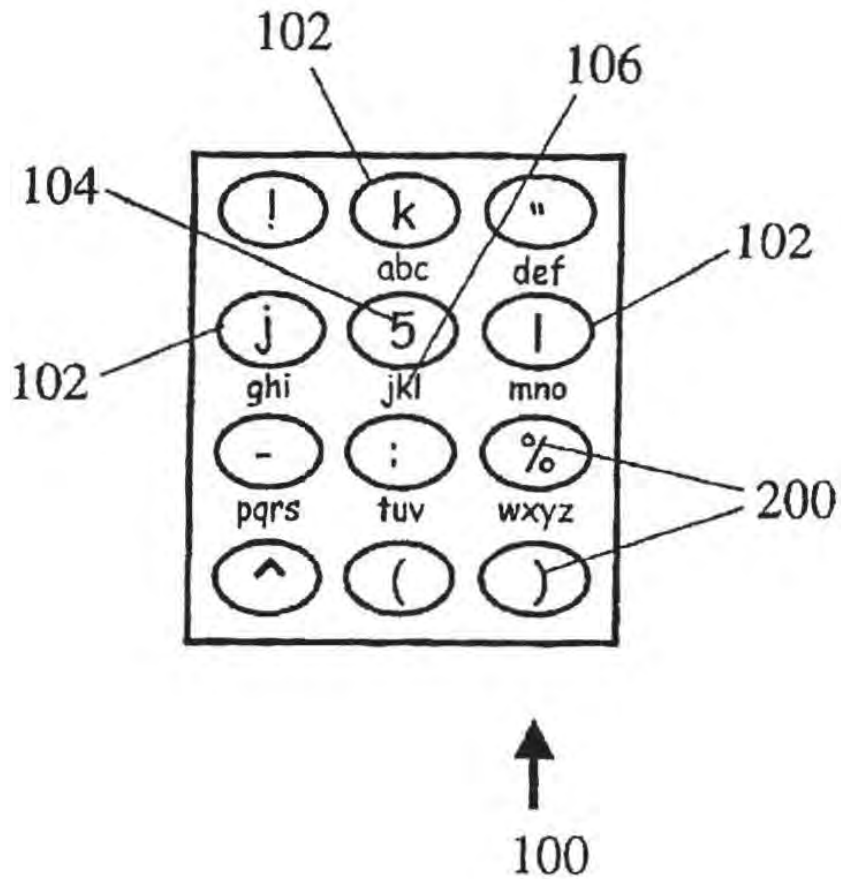


Fig. 2

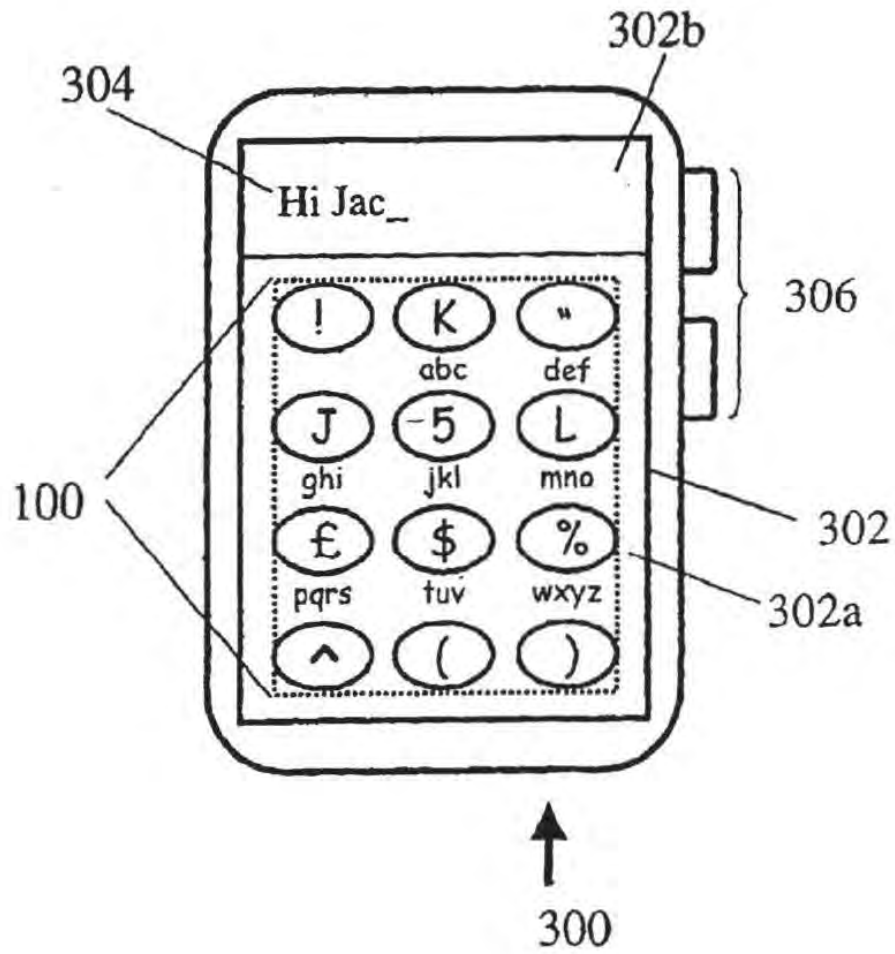


Fig. 3

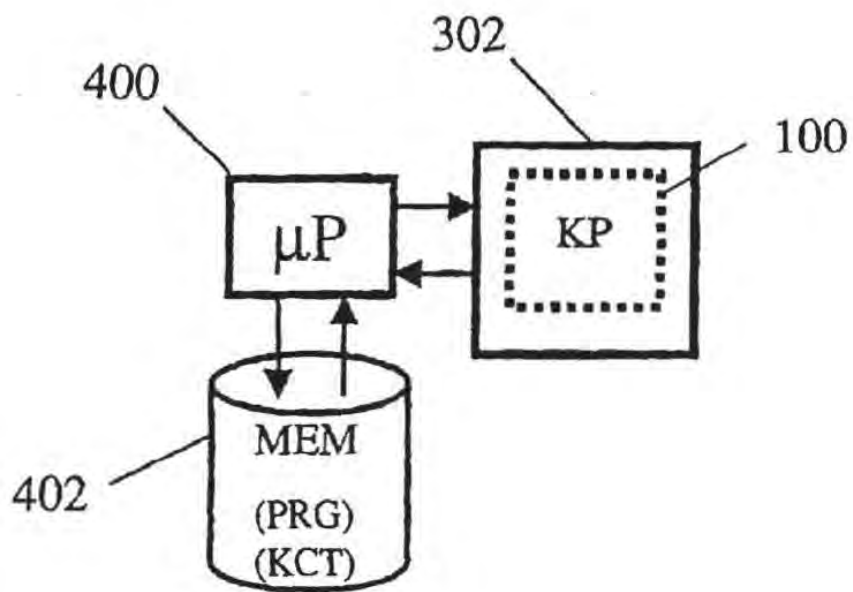


Fig. 4

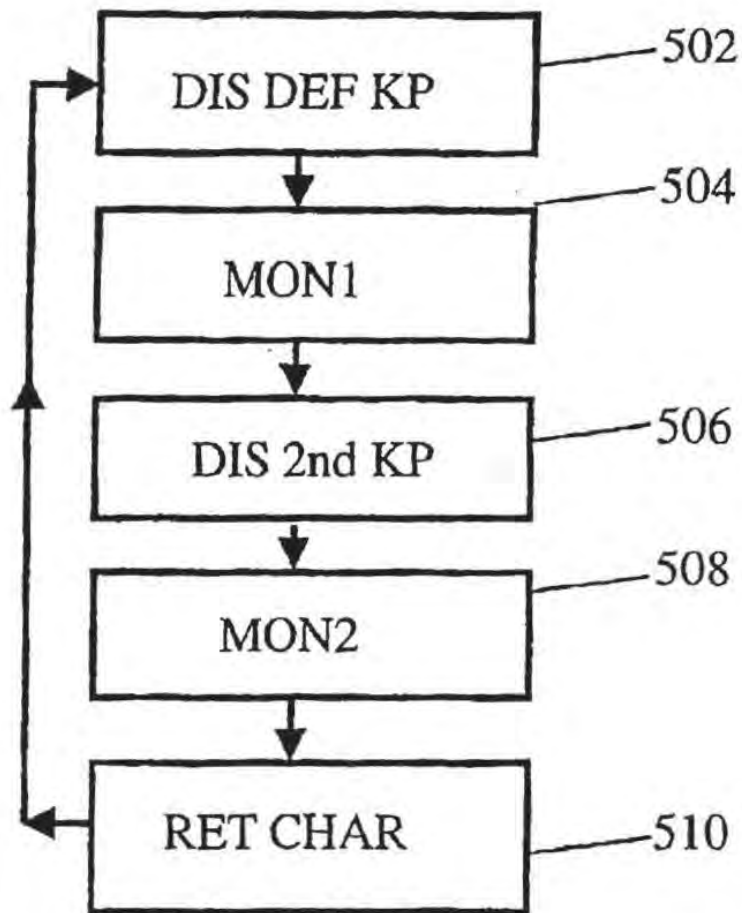


Fig. 5

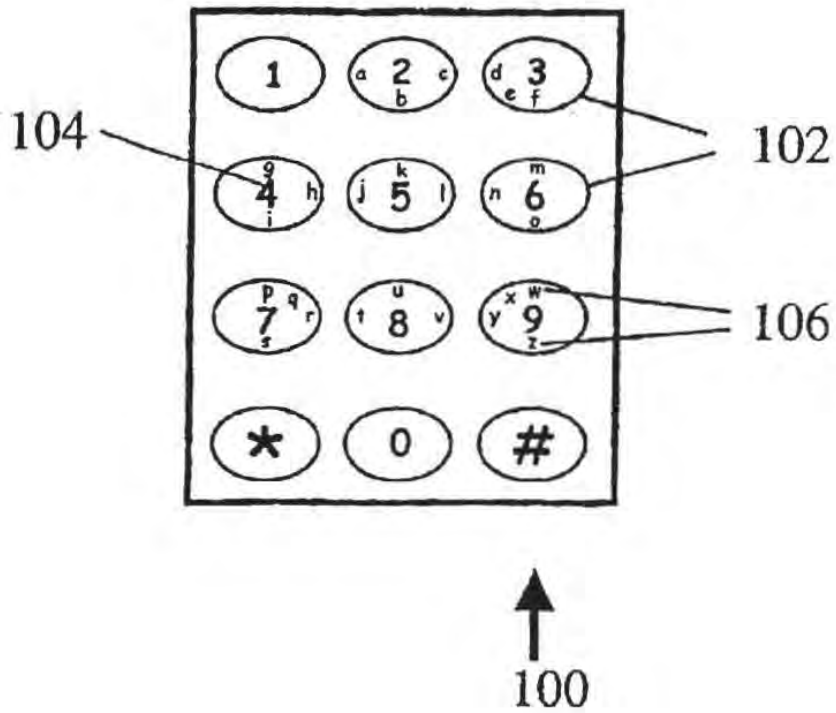


Fig. 6

**TEXT ENTRY METHOD AND DEVICE
THEREFOR**

The present invention relates to a method of entering text into a device, and to a device such as a portable radio telephone or a handheld computer suitably adapted to implement said method.

Portable radio telephone, or "mobile phone", ownership during recent years has been well documented and reported world-wide. Whilst mobile phone networks such as the Global System for Mobile communications (GSM) were originally designed for voice traffic, the sending of text messages using a Short Messaging Service (SMS) via suitably equipped phones has risen dramatically over the past couple of years, with the number of SMS messages sent world-wide on the GSM networks reaching fifteen billion in December 2000. This is in part due to the critical mass of ownership now reached in developed countries and also due to the low and typically fixed costs of sending a text message when compared with a voice call. The popularity of text messaging is also explained by the private and often intimate communication path offered by a text message. The numbers of text messages sent and received by users are forecast to increase even further with the impending introduction of more advanced, so-called 3G (third generation) wireless networks and services, where data, fax and more advanced e-mail services will be available on a 3G mobile phone or suitably equipped handheld computer or personal digital assistant (PDA).

A known method of entering text into devices such as mobile phones involves a user pressing a key on a keypad several times to cycle through characters associated with the key, until the character required is selected. For example, the number "2" key is associated with the characters "abc", the "3" key with the characters "def", the "4" key with the characters "ghi", the "5" key with "jkl" and so on. To select the character "a", the "2" key is pressed once. To select the character "b" the "2" key is press twice. The character "l" is selected by pressing the "5" key three times and so forth. Special characters (for example full stop, exclamation mark, double quote, dollar, percent, ampersand and star) are produced by tapping the one or zero keys several times until the required special character is selected. This method of entering text, commonly referred to as the "multitap" method is at present almost ubiquitous on mobile phones due to agreed standardisation between mobile phone manufacturers and service providers. Users are therefore very familiar with the multitap keypad layout and character association. However, this method often requires more than two key taps to select a character, and the entering of special characters can take many key taps. The method is therefore slow and prone to error.

An alternative method of inputting text to a device is disclosed in U.S. Pat. No. 5,128,672 wherein the device comprises a dynamic predictive keyboard which is graphically represented on a touch sensitive display. A user inputs a character by pressing a key with the required character displayed on it. Following a character input, software provided within the device formulates a prediction, based on statistical analysis of the make-up and composition of English words of the next most likely character required by the user and consequently the layout of the keyboard is

altered such that said most likely character is displayed on the keyboard. This has the problem that the keyboard does not resemble the multitap keypad familiar to mobile phone users, thereby presenting an unfamiliar interface to the average user. This problem is further compounded since in use the constant changing of the keyboard layout necessitates much practice and learning for proficient and quick text entry. Furthermore, the access and input of special characters is a problem unsolved by the predictive means of U.S. Pat. No. 5,128,672.

It is therefore an aim of the present invention to provide an improved method of entering characters into a device such as a mobile phone or handheld computer. It is a further aim of the present invention to provide a method consistent with a keypad with which mobile phone users are familiar.

According to a first aspect of the present invention there is provided a method for inputting a character to a device, the device comprising a keypad, the keypad comprising a plurality of keys, at least one of which keys has a primary character, a plurality of secondary characters and a display area associated with it, the keypad in a default state displaying the primary character associated with a key in its respective display area, wherein the method comprises the steps of: detecting a first key selection; displaying each of the secondary characters associated with the first selected key in a respective display area; detecting a second key selection; selecting for input the secondary character associated with the second key selection; and returning the keypad to the default state.

According to a second aspect of the present invention there is provided a device for receiving character input, comprising a keypad having a plurality of keys, a key having a primary character, a plurality of secondary characters and a display area associated with it, wherein means are provided for displaying in a default state the primary character associated with a key in its respective display area, means responsive to a first key selection are provided for displaying each of the secondary characters associated with the selected key in a respective display area, and means responsive to a second key selection are provided for selecting as input character the secondary character associated with the second key selected and for returning the keypad to its default state.

The device and method of this invention comprise a keypad having a default display state wherein primary, and optionally secondary, characters are displayed. A user inputs a character by selecting the key having that character as one of its associated secondary characters, following which the keypad displays the required character which is then input via an appropriate second key selection.

In one embodiment of the present invention the keypad is displayed on a touch screen, the touchscreen having an output area for displaying characters input by the user. In this embodiment the display area associated with a key is provided by an area of touchscreen within or adjacent to the graphical representation of the key or button.

In another embodiment of the present invention the associated display area of a key is provided by display means such as a liquid crystal display within or adjacent to the key or button. The display means are arranged such that a displayed character is visible to the user, and hence character association with the key is rendered obvious to the user.

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The method and device of this invention provide improved text entry particularly suited to, but not exclusively for, hand held devices such as portable mobile radio telephones, personal digital assistants, pocket computers and remote control handsets.

Embodiments of the present invention will now be described, by way of example only, with reference to the accompanying figures in which:

FIG. 1 depicts a default display state of a keypad for use with the present invention.

FIG. 2 illustrates an example of the characters displayed on the keypad after a first key selection.

FIG. 3 depicts an example of a device made in accordance with the present invention.

FIG. 4 is a schematic diagram of components of the device of FIG. 3.

FIG. 5 is a flow diagram illustrating a basic implementation of a method according to the present invention.

FIG. 6 depicts an alternative default display state of a keypad for use with the present invention.

In the figures the same reference numerals have been used to indicate corresponding features.

FIG. 1 depicts a keypad 100 in a default display state wherein twelve keys 102 are arranged in four rows of three keys. Each key has a primary character 104 and a plurality of secondary characters 106 associated with it. The primary character 104 displayed on each key 102 is, in this embodiment, selected from the group of characters 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, # and *. The secondary characters 106 associated with each key are shown in groups adjacent the respective key. The secondary character groupings in this embodiment are similar to those of the multitap method, for example the key associated with primary character "2" has an associated secondary character grouping "abc", the key "3" the associated secondary characters "deP" and so on as shown in the figure. Hence, the default display state of the keypad 100 as shown in FIG. 1 presents to the user a keypad having a well known key and character layout, thereby necessitating little or no familiarisation.

FIG. 2 illustrates a possible display state of the keypad 100 after a first key selection by a user, the selected key in this example being the "5" key (the key associated with the primary character "5" and secondary characters "jkl"). The secondary character "j" is displayed by the display area associated with a neighbouring key, in this example the key associated with the primary character "4" adjacent the "5" key. Similarly, the secondary characters "k" and "l", associated with the first key selection, are displayed respectively on the keys previously displaying "2" and "6" as primary characters. In this example the remaining keys have displayed upon them further characters 200 which are useful for text entry. For example characters representing an exclamation mark, a double quote, a pound, a dollar sign, left and right brackets, a percentage symbol and a caret may be displayed as shown in FIG. 2.

A second key selection from the keypad of FIG. 2 selects the character displayed on the display area associated with said second key for input. Following a character input, the keypad of FIG. 2 is returned to the default display state as shown in FIG. 1.

The key selections are typically provided by a user's finger or stylus and may comprise the user tapping a first key

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followed by the user tapping a second key. Alternatively, the user may make a second key selection by sliding or dragging said finger or stylus across the keypad from the first key to the second key and pausing on, or removing the finger or stylus from, the required second key.

The dynamic keypad states illustrated in FIG. 1 and FIG. 2 provide a method of quick and accurate character input wherein secondary characters are available with only two key selections. Additionally the method is intuitive and requires little or no learning by the user due to the provision of a familiar default keypad display state.

An embodiment of a device employing the keypad and features of this method and made in accordance with the present invention is shown in FIG. 3. The figure depicts a hand-held device 300 such as a personal digital assistant (PDA) or sometimes called a handheld computer. The device comprises a touchscreen 302 comprising touch input means arranged to detect touch input upon a surface of a display means (such as a liquid crystal or organic light emitting diode display). The touchscreen in this embodiment displays a keypad 100 to the user within a touch input region 302a of the touchscreen, whilst input characters 304 are displayed in an output region 302b of the touchscreen 302. In FIG. 3 the keypad 100 is shown in the second display state of FIG. 2, wherein a first key selection of the key "5" has occurred and the keypad awaits a second key selection to input a character. The device further comprises control buttons 306 provided to power up the device or change mode of usage for example. Additionally the handheld device may incorporate means (not shown on FIG. 3) to transmit and receive data including voice and text messaging wirelessly via a suitable network.

The device 300 further comprises components adapted for carrying out a method in accordance with the present invention, these components being schematically represented in FIG. 4. The relevant components comprise a computer program (PRG) and processing means in the form of a general purpose microprocessor 400 (μ P). The computer program is stored in computer readable storage media 402 (MEM), the PRG comprising instructions to instruct the microprocessor (μ P) 400 to carry out the steps of a method according to the present invention. It is noted herewith that although the processing means of this embodiment comprise a general purpose microprocessor, other suitable forms of processing means such as dedicated logic circuits, PICmicro® chips or application specific integrated circuits (ASIC) operating with or without a computer program could be employed in alternative embodiments.

In FIG. 4 there is also provided the touchscreen 302, the touchscreen able to display a keypad 100 (KP) and detect touch input for inputting characters. In this embodiment the display area associated with each key 102 of the keypad 100 is provided by an area of touchscreen 302 within or adjacent to the graphical representation of the key 102.

Additionally, one or more key character tables (KCT) are provided within MEM 402. A KCT provides information to the microprocessor relating to the default keypad to be displayed on the touchscreen, and also provides the primary and secondary characters which are to be displayed upon a first key selection.

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An example of a KCT is presented below (Table 1).

TABLE 1

KEY	PRIMARY CHARACTER	SECONDARY CHARACTER(S)
1	1	Not used
2	2	abc
3	3	def
4	4	ghi
5	5	jkl
6	6	mno
7	7	pqrs
8	8	tuv
9	9	wxyz
0	0	Not used
*	*	Not used
#	#	Not used

Table 1 thereby provides primary and secondary characters to the microprocessor which, under the guidance of PRG instructs the touchscreen to display these characters in the appropriate locations to build up a default keypad display state corresponding to FIG. 1 and Table 1.

Similarly a KCT relating to a first key selection of key 5 is shown below in Table 2.

TABLE 2

KEY	DISPLAY SECONDARY CHARACTER
1	l
2	k
3	*
4	j
5	5
6	l
7	£
8	\$
9	%
0	-
*	(
#)

This KCT provides the characters displayed upon a first key selection corresponding to key 5 thereby providing a second keypad display state as shown in FIG. 2.

In operation, the microprocessor 400, under the guidance of PRG looks up the default key character assignments stored in MEM 402 as a KCT (for example the KCT of Table 1) and instructs the touchscreen 302 to display the keypad 100 in a default display state. The touchscreen is sampled repeatedly until a first key selection is detected, following which the appropriate characters to be displayed are retrieved from an appropriate stored KCT (e.g. Table 2) by the microprocessor and provided to the touchscreen which updates the keypad 100 displayed. Following these operations the touchscreen is sampled repeatedly for a second key selection.

Upon detection of a second key selection the microprocessor 400 compares the key selected with the displayed KCT (Table 2 for example) and returns the input character for display in the output region 302b of the touchscreen 302. Finally, the microprocessor instructs the touchscreen to display the default keypad and awaits further user interaction.

A flow diagram illustrating the main steps of this method is presented in FIG. 5, the method being performed as a loop, wherein:

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A default keypad is displayed (DIS DEF KP) 502
The keypad is monitored for a first key selection (MON1) 504

Following a first key selection the appropriate characters are displayed on the keypad (DIS 2nd KP) 506
The keypad is monitored for a second key selection (MON2) 508

Following a second key selection the secondary character associated with the second key selection is returned as an input character (RET CHAR) 510

Loop back to display the default keypad (DIS DEF KP) 502

In a further embodiment, the first key selection is reported only after the key is selected by a user for a pre-determined time period, for example a time period of 0.2 seconds. This enables quick tapping to select the default primary characters displayed on a default keypad, thereby allowing fast number entry when required without altering the keypad display state.

According to a further embodiment of this invention, the display of primary or secondary characters associated with a key is achieved by providing an associated display area within, on or situated adjacent to the key. The default assigned secondary characters are provided adjacent to the keys on the keypad, and the user presses the keys to input characters in accordance with a method of this invention.

In a further embodiment of this invention, the default display state of the keypad comprises positioning some of the secondary characters associated with a key such that the key display area upon which a secondary character will be displayed next is indicated to the user. An example of a keypad default display state according to this embodiment is given in FIG. 6 wherein secondary characters are displayed within a key, each secondary character being positioned relative to the key upon which it will appear following a first key selection. For example, the key displaying the primary character "5" has the secondary characters "j", "k" and "l" positioned to the left, above and right of the "5" respectively. Hence a visual indication of the key upon which each character will appear should the "5" be first selected is provided to the user. In this example the default display state provides an indication that the "j" will appear on the "4" key to the left of the "5" key, as is shown in the example of the keypad in FIG. 2.

In yet a further embodiment of this invention, one or more of the key character tables are alterable, thereby providing a user with the option of customising the keypad to his or her preference.

Whilst the embodiments described hereinbefore apply this invention to handheld devices such as PDAs and mobile phones, it will be apparent to those skilled in the art that the teaching of this invention may also be applied to advantage to devices wherever character input is required, such as remote control handsets or children's learning aids and toys.

Additionally, the characters assigned as primary and or secondary characters may be any characters convenient for the device, language and application chosen, and the keypad may comprise more or less keys displaying more or less characters than those illustrated herein without departing from the spirit and scope of this invention.

What is claimed is:
1. A method for inputting a character to a device, the device comprising a keypad, the keypad comprising a plu-

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ality of keys, at least one of which keys has a primary character, a plurality of secondary characters and a display area associated with it, the keypad in a default state displaying the primary character associated with a key in its respective display area, wherein the method comprises the steps of:

- detecting a first key selection;
- displaying each of the secondary characters associated with the first selected key in a respective display area;
- detecting a second key selection;
- selecting for input the secondary character associated with the second key selection; and
- returning the keypad to the default state.

2. A method according to claim 1, wherein the keypad in a default state further displays associated secondary characters adjacent the primary character, the location of each secondary character providing an indication of which display area will display that secondary character following a first key selection.

3. A computer program product stored on a computer readable medium for performing all of the steps of claim 1 when the program is run on a device for receiving character input.

4. A device for receiving character input, comprising a keypad having a plurality of keys, at least one of which keys

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has a primary character, a plurality of secondary characters and a display area associated with it, wherein means are provided for displaying in a default state the primary character associated with a key in its respective display area, means responsive to a first key selection are provided for displaying each of the secondary characters associated with the selected key in a respective display area, and means responsive to a second key selection are provided for selecting as input character the secondary character associated with the second key selection and for returning the keypad to its default state.

5. A device as claimed in claim 4, further comprising a touchscreen on which the keypad is displayed and wherein the display area associated with a key comprises a respective portion of the touchscreen.

6. A device as claimed in claim 4, wherein the display area associated with a key is provided by display means within the key.

7. A device as claimed in claim 4, wherein the display area associated with a key is provided by display means adjacent the key.

* * * * *

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Koninklijke Philips Electronics N.V.

Application No./Patent No.: US 6,885,318 Filed/Issue Date: April 26, 2005

Titled: TEXT ENTRY METHOD AND DEVICE THEREFOR

Koninklijke Philips Electronics N.V., a Corporation

(Name of Assignee)

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

states that it is:

1. the assignee of the entire right, title, and interest in;
 2. an assignee of less than the entire right, title, and interest in
 (The extent (by percentage) of its ownership interest is _____ %); or
 3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)
- the patent application/patent identified above, by virtue of either:

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 012954, Frame 0107, or for which a copy therefore is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. 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.
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 The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.
3. 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(b)(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.

/Michael E. Marion/

Signature

July 31, 2013

Date

Michael E. Marion

Printed or Typed Name

Authorized Signatory

Title

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.

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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.
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875		Application or Docket Number 13/955,345	Filing Date 07/31/2013	<input type="checkbox"/> To be Mailed
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO				
APPLICATION AS FILED – PART I				
(Column 1)		(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 = *	+	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *	+	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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	07/31/2013	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	* 16	Minus ** 20	= 0
	Independent (37 CFR 1.16(h))	* 3	Minus *** 3	= 0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))			
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))			
		TOTAL ADD'L FEE		0
AMENDMENT	Total (37 CFR 1.16(i))	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Independent (37 CFR 1.16(h))	*	Minus	**
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))			
	<input type="checkbox"/> 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 /ANNETTE COWAN/				

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 NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/955,345	07/31/2013	2681	3040	2001P00413US01	16	3

CONFIRMATION NO. 6652

FILING RECEIPT



24737
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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BRIARCLIFF MANOR, NY 10510

Date Mailed: 09/03/2013

Receipt is acknowledged of this reissue 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)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Applicant(s)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Assignment For Published Patent Application

KONINKLIJKE PHILIPS ELECTRONICS N.V., EINDHOVEN, NL

Power of Attorney: The patent practitioners associated with Customer Number 24737

Domestic Priority data as claimed by applicant

This application is a REI of 10/156,409 05/28/2002 PAT 6885318

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.)

UNITED KINGDOM 0116083.7 06/30/2001 No Access Code Provided

If Required, Foreign Filing License Granted: 08/30/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/955,345**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

TEXT ENTRY METHOD AND DEVICE THEREFOR

Preliminary Class

341

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

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/955,345		
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 <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	280	
SEARCH FEE <small>(37 CFR 1.16(k), (j), or (m))</small>	N/A	N/A	N/A			N/A	600	
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	2160	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	16	minus 20 =			OR	x 80 =	0.00	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	3	minus 3 =			OR	x 420 =	0.00	
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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 <small>(37 CFR 1.16(j))</small>							0.00	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	3040	
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 <small>(37 CFR 1.16(i))</small>	*	Minus **	**	x	-	OR	x	-
Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	**	x	-	OR	x	-
Application Size Fee <small>(37 CFR 1.16(s))</small>						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
			TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE	
	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total <small>(37 CFR 1.16(i))</small>	*	Minus **	**	x	-	OR	x	-
Independent <small>(37 CFR 1.16(h))</small>	*	Minus ***	**	x	-	OR	x	-
Application Size Fee <small>(37 CFR 1.16(s))</small>						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
			TOTAL ADD'L FEE			OR	TOTAL ADD'L FEE	
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>								



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/955,345	07/31/2013	Matthew J. Bickerton	2001P00413US01

CONFIRMATION NO. 6652

24737
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

FORMALITIES LETTER



Date Mailed: 09/03/2013

NOTICE TO FILE MISSING PARTS OF REISSUE APPLICATION

Filing Date Granted

An application number and filing date have been accorded to this reissue application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration.

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 (and 37 CFR 1.175) executed by or with respect to each inventor is required. For a reissue application, the inventor's oath or declaration must be submitted prior to examination and cannot be postponed. See 37 CFR 1.175(e). An assignee of the entire interest can execute the oath or declaration if: (1) the application does not seek to enlarge the scope of the claims of the original patent; or (2) the application for the original patent was filed under 37 CFR 1.46 by the assignee of the entire interest. A substitute statement under 37 CFR 1.64 in lieu of an oath or declaration may be submitted in the circumstances provided for in 35 U.S.C. 115(d) and 37 CFR 1.64.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of the basic filing fee, search fee, examination fee or inventor's oath or declaration) as set forth in 37 CFR 1.16(f) of \$ 140 for an undiscounted entity, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is \$ 140 for an undiscounted entity

- \$ 140 Surcharge.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/klnelson/

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	Atty. Docket No.
Matthew J. Bickerton	2011P00413US01
Serial No.: 13/955,345	Confirmation No. 6652
Filed: 07/31/2013	Customer No. 24737
Title: TEXT ENTRY METHOD AND DEVICE THEREFOR	

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

RESPONSE TO NOTICE TO FILE MISSING
PARTS OF REISSUE APPLICATION

Sir:

In response to the NOTICE TO FILE MISSING PARTS OF REISSUE APPLICATION mailed on September 3, 2013, enclosed is a Declaration, properly signed by the Assignee and referring to the above case by its Serial Number and filing date, in compliance with 37 CFR 1.1369a). Accordingly, the above-identified patent application is now complete.

Please charge Deposit Account No. 14-1270 in the amount of \$140.00 for the surcharge for filing the Declaration on a date later than the filing date of the application, as set forth in 37 CFR 1.16(f).

Respectfully submitted,

By /Michael E. Belk/
Michael E. Belk, #33,357
Attorney
(914) 333-9643

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.

REISSUE APPLICATION DECLARATION BY THE ASSIGNEE		Docket Number (optional) 2001P00413US01	
<p>I hereby declare that:</p> <p>The residence and mailing address of the inventor or joint inventors are stated below.</p> <p>I am authorized to act on behalf of the following assignee: <u>Koninklijke Philips Electronics N.V.</u></p> <p>The entire title to the patent identified below is vested in said assignee.</p>			
<p>Inventor Matthew J. Bickerton</p>			
Residence: City Bletchingley		State	Country GB
Mailing Address Tye Copse Cottage			
City Bletchingley	State	Zip RH14NE	Country GB
<input type="checkbox"/> Additional Inventors are named on separately numbered sheets attached hereto.			
Patent Number 6,885,318		Date of Patent Issued April 26, 2005	
<p>I believe said inventor(s) to be the original inventor or original joint inventors of the subject matter which is described and claimed in said patent, for which a reissue patent is sought on the invention titled:</p> <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> <p>TEXT ENTRY METHOD AND DEVICE THEREFOR</p> </div> <p>the specification of which</p> <p><input type="checkbox"/> is attached hereto.</p> <p><input checked="" type="checkbox"/> was filed on <u>07/31/2013</u> as reissue application number <u>13/955,343</u>.</p> <p>The above-identified application was made or authorized to be made by me.</p> <p>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.</p> <p>I believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)</p> <p><input type="checkbox"/> by reason of a defective specification or drawing.</p> <p><input checked="" type="checkbox"/> by reason of the patentee claiming more or less than he had the right to claim in the patent.</p> <p><input type="checkbox"/> by reason of other errors.</p>			

[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. 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 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.

REISSUE APPLICATION DECLARATION BY THE ASSIGNEE		Docket Number (Optional) 2001P00413U	
At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, a claim that the application seeks to broaden must be identified and the box below must be checked:			
The error in the patent is caused by the patentee claiming more than he had a right to claim in the patent. (continued on attached sheet)			
[Attach additional sheets, if needed.]			
<input checked="" type="checkbox"/> The application for the original patent was filed under 37 CFR 1.46 by the assignee of the entire interest.			
I hereby appoint:			
<input checked="" type="checkbox"/> Practitioners associated with Customer Number:		24737	
OR			
<input type="checkbox"/> Practitioner(s) named below:			
Name		Registration Number	
as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.			
Correspondence Address: Direct all communications about the application to:			
<input checked="" type="checkbox"/> The address associated with Customer Number:		24737	
OR			
<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone		Email	
WARNING:			
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.			
Signature /Michael E. Marion/		Date (Optional) September 4, 2013	
Full name of person signing (given name, family name) Michael E. Marion			
Address of Assignee P.O. Box 3001, Briarcliff Manor, NY 10510			

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.

ADDITIONAL STATEMENT OF ERROR UPON WHICH REISSUE IS BASED

The patentee believes the original patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more than the patentee had the right to claim in the patent. Specifically, the error in the patent is caused by the omission of a narrower claim from the patent that renders the patent partly inoperative by failing to protect the disclosed invention to the full extent allowed by law.

The Patentee respectfully asserts that the error is corrected by an amendment that adds at least one dependent claim, for example claim 8, which protects the disclosed invention in accordance with the specification of the Patent, thus improving on the state of the art. Previously the patentee had neglected, without deceptive intent, to protect this disclosed invention in accordance with the specification of the Patent.

No new matter is added by this amendment in this reissue application. All errors in the patent being corrected in the present reissue application up to the time of filing this oath/declaration, that are not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the patentee.

Electronic Patent Application Fee Transmittal

Application Number:	13955345			
Filing Date:	31-Jul-2013			
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR			
First Named Inventor/Applicant Name:	Matthew J. Bickerton			
Filer:	Michael E. Belk/Elissa DeLuccy			
Attorney Docket Number:	2001P00413US01			
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:				
Late Filing Fee for Oath or Declaration	1051	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				140

Electronic Acknowledgement Receipt

EFS ID:	16755150
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Michael E. Belk/Elissa DeLuccy
Filer Authorized By:	Michael E. Belk
Attorney Docket Number:	2001P00413US01
Receipt Date:	04-SEP-2013
Filing Date:	31-JUL-2013
Time Stamp:	08:19:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$140
RAM confirmation Number	8684
Deposit Account	141270
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Response to Pre-Exam Sequence Notice	2001P00413US01_Response_M P.pdf	34115 27b4424dc56a40207f1db8d3651b83ac4 7fc1d	no	1
Warnings:					
Information:					
2	Reissue dec filed in accordance with MPEP 1414	2001P00413US01_New_Declar ation.pdf	401823 e13778482c2ec1b150462f34d2c0602edf 6e272	no	4
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30121 6a2eddc4132045e54db24162c1b353896e 15604	no	2
Warnings:					
Information:					
Total Files Size (in bytes):				466059	
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/955,345			
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	2160	
TOTAL CLAIMS (37 CFR 1.16(i))	16	minus 20 =	*			OR	x 80 =	0.00	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 =	*			OR	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	
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL			TOTAL	3040	
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	
	(Column 1)	(Column 2)	(Column 3)		SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
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	
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>									



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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP PART UNIT	FIL FEE REC'D	ATTY DOCKET NO	TOT CLAIMS	IND CLAIMS
13/955,345	07/31/2013	2681	3180	2001P00413US01	16	3

CONFIRMATION NO. 6652

UPDATED FILING RECEIPT

24737
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510



Date Mailed: 01/08/2014

Receipt is acknowledged of this reissue 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)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Applicant(s)

Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;

Assignment For Published Patent Application

KONINKLIJKE PHILIPS ELECTRONICS N.V., EINDHOVEN, NL

Power of Attorney: The patent practitioners associated with Customer Number 24737

Domestic Priority data as claimed by applicant

This application is a REI of 10/156,409 05/28/2002 PAT 6885318

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.)

UNITED KINGDOM 0116083.7 06/30/2001 No Access Code Provided

If Required, Foreign Filing License Granted: 08/30/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/955,345**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

TEXT ENTRY METHOD AND DEVICE THEREFOR

Preliminary Class

341

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).

**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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.

NOT GRANTED

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156409 (10) 6885318 April 26, 2005

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

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April 26, 2005

Text entry method and device therefor

INVENTOR: Bickerton, Matthew J. - Bletchingley, United Kingdom of Great Britain and Northern Ireland (GB), United Kingdom of Great Britain and Northern Ireland ()**APPL-NO:** 156409 (10)**FILED-DATE:** May 28, 2002**GRANTED-DATE:** April 26, 2005**PRIORITY:** June 30, 2001 - 0116083, United Kingdom of Great Britain and Northern Ireland (GB)**ASSIGNEE-PRE-ISSUE:**

May 28, 2002 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., KONINKLIJKE PHILIPS ELECTRONICS N.V. NL-5621 BA EINDHOVEN, Reel and Frame Number: 012954/0107

May 28, 2002 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., KONINKLIJKE PHILIPS ELECTRONICS N.V. GROENEWOUDSEWEG 1NL-5621 BA EINDHOVEN, (1), Reel and Frame Number: 012954/0107

ASSIGNEE-AT-ISSUE:

Koninklijke Philips Electronics N.V., Eindhoven, Kingdom of the Netherlands (NL), Foreign company or corporation (03)

LEGAL-REP: Thorne, Gregory L.**PUB-TYPE:** April 26, 2005 - Patent with a pre-grant publication (B2)**PUB-COUNTRY:** United States of America (US)**LEGAL-STATUS:**

May 28, 2002 - ASSIGNMENT

July 9, 2008 - FEE PAYMENT

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October 19, 2012 - FEE PAYMENT
July 9, 2008 - Payment of Maintenance Fee, 4th Year, Large Entity.
October 19, 2012 - Payment of Maintenance Fee, 8th Year, Large Entity.

FILING-LANG: English (EN) (ENG)

PUB-LANG: English (EN) (ENG)

REL-DATA:

Prior Publication 20030025616, February 6, 2003, Patent Application Publication (A1)

US-MAIN-CL: 341#22

US-ADDL-CL: 345#168, 379#368, 400#486

CL: 341, 345, 379, 400

SEARCH-FLD: 341#22, 379#368, 379#906, 400#477, 400#486, 345#168

IPC-MAIN-CL: [7] H03K 017#94

IPC-MAIN-CL: [8] G06F 003#02 (20060101) Advanced Inventive 20051220 (A F I R M JP)

IPC-ADDL-CL: [7] H03M 011#00

IPC-ADDL-CL: [8] G06F 003#23 (20060101) Advanced Inventive 20051008 (A I R M EP)

IPC-ADDL-CL: [8] G06F 003#33 (20060101) Advanced Inventive 20051008 (A I R M EP)

IPC-ADDL-CL: [8] G06F 003#48 (20060101) Advanced Inventive 20070721 (A I R M EP)

IPC-ADDL-CL: [8] H03M 011#04 (20060101) Advanced Inventive 20051220 (A L I R M JP)

IPC-ADDL-CL: [8] H04M 001#23 (20060101) Advanced Inventive 20051220 (A L I R M JP)

IPC-ADDL-CL: [8] H04M 001#725 (20060101) Advanced Inventive 20051220 (A L I R M JP)

IPC-ADDL-CL: [8] H04Q 007#38 (20060101) Advanced Inventive 20051220 (A L I R M JP)

PRIM-EXMR: Edwards, Jr., Timothy

REF-CITED:

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NON-PATENT LITERATURE:

Patent Abstracts of Japan, Ono Katsuyasu: "Adjacent Character Display Keyboard," Publication No. 07200120, Apr. 8, 1995, Application No. 05355185, Dec. 28, 1993.

CORE TERMS: keypad, display, secondary, user, displayed, default, input, touchscreen, mobile, phone,



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SECTION: Pg. p34(7) Vol. V91 No. N8 ISSN: 0040-1692

ACC-NO: 6885318

LENGTH: 2857 words

HEADLINE: Artificial organs: learning to live with risk.

BYLINE: Galletti, Pierre M.

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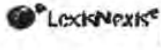
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<p>I hereby declare that:</p> <p>The residence, mailing address and citizenship of the inventors are stated below.</p> <p>I am authorized to act on behalf of the following assignee: <u>KONINKLIJKE PHILIPS ELECTRONICS N.V.</u></p> <p>and the title of my position with said assignee is: <u>AUTHORIZED SIGNATORY</u></p> <p>The entire title to the patent identified below is vested in said assignee.</p>	
Inventor <u>Matthew J. Bickerton</u>	Citizenship <u>GB</u>
Residence/Mailing Address <u>Tye Copse Cottage, Bletchingley, GB RH14NE</u>	
Inventor	Citizenship
Residence/Mailing Address	
<input type="checkbox"/> Additional Inventors are named on separately numbered sheets attached hereto.	
Patent Number <u>6,885,318</u>	Date of Patent Issued <u>April 26, 2005</u>
<p>I believe said inventor(s) to be the original and first inventor(s) of the subject matter which is described and claimed in said patent, for which a reissue patent is sought on the invention entitled:</p> <div style="border: 1px solid black; padding: 10px; min-height: 40px;"> <p style="text-align: center;">TEXT ENTRY METHOD AND DEVICE THEREFOR</p> </div> <p>the specification of which</p> <p><input type="checkbox"/> is attached hereto.</p> <p><input checked="" type="checkbox"/> was filed on <u>July 31, 2013</u> as reissue application number <u>13</u> / <u>955,345</u></p> <p>and was amended on <u>July 31, 2013</u></p> <p style="text-align: center;">(If applicable)</p> <p>I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.</p> <p>I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.</p> <p><input checked="" type="checkbox"/> I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/02B (or equivalent) listing the foreign applications.</p> <p>I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)</p> <p><input type="checkbox"/> by reason of a defective specification or drawing.</p> <p><input checked="" type="checkbox"/> by reason of the patentee claiming more or less than he had the right to claim in the patent.</p> <p><input type="checkbox"/> by reason of other errors.</p>	

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ADDITIONAL STATEMENT OF ERROR UPON WHICH REISSUE IS BASED

The patentee believes the original Patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more than the patentee had the right to claim in the Patent. Specifically, the error in the Patent is caused by the omission of a narrower claim from the Patent that renders the Patent partly inoperative by failing to protect the disclosed invention to the full extent allowed by law.

The patentee respectfully asserts that the error is corrected by an amendment that adds at least one dependent claim, for example claim 8, which protects the disclosed invention in accordance with the specification of the Patent, thus improving on the state of the art. For example, claim 8 is added to recite that "the means for switching to a second state comprises a means for detecting a sliding across the keypad from the first key selection to the second key selection." Support for the subject matter of the claim is provided by the Patent, in the accompanying description for example contained in col. 3, line 66 through col. 4, line 5. Previously the patentee had neglected, without deceptive intent, to protect this disclosed invention in accordance with the specification of the Patent.

Further, the patentee has elected to amend claim 1 for example to recite that (e.g., see, Patent, FIGs. 1-5 and the accompanying description contained in col. 5, line 65 through col. 6, line 19, changes to the claim element indicated with underlining showing additions) "in the default state, returning the primary character as an input character in response to selection of the at least one key for a period shorter than a predetermined time period; switching to a second state after detecting a first key selection of the at least one key for a period longer than a predetermined time period; in the second state, displaying each of the secondary characters associated ..." Patentee has also elected to amend claim 1 for example for better conformance to U.S. practice such as clarifying antecedence language where for example, "selecting for input the secondary character ..." is clarified as "selecting for the input character the secondary character ..."

No new matter is added by this amendment in this reissue application. All errors in the Patent being corrected in the present reissue application up to the time of filing this oath/declaration that are not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the patentee.

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EFS ID:	18380310
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Michael E. Belk/Elissa DeLuccy
Filer Authorized By:	Michael E. Belk
Attorney Docket Number:	2001P00413US01
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Application Type:	Utility under 35 USC 111(a)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket: 2001PF00413US01

MATTHEW J. BICKERTON

Confirmation No.: 6652

Original Patent No: 6,885,318

Original Issue date: APRIL 26, 2005

Serial No.: 13/955,345

Group Art Unit: 2681

Filed: JULY 31, 2013

Examiner: N/A

Title: TEXT ENTRY METHOD AND DEVICE THEREFOR

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

REPLY

Sir:

Please consider the remarks in the Application as follows:

REMARKS/ARGUMENTS

Claims 1-16 are pending in the Application.

Please discard the declaration previously filed today and substitute the declaration submitted herewith. The declaration submitted herewith includes the updated USPTO Reissue Application Declaration by the Assignee Form PTO/AIA/06 in place of USPTO Form PTO/SB/52 previously filed.

It is respectfully submitted that the reissue oath/declaration is proper and an indication to that effect is respectfully requested.

A diligent and sincere effort to place this Patent back in condition for immediate allowance is made herein and notice to this effect is earnestly solicited.

Respectfully submitted,

By /Gregory L. Thorne/

Gregory L. Thorne, Reg. 39,398
Attorney for Applicant(s)

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<input type="checkbox"/> Additional inventors are named on separately numbered sheets attached hereto.			
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The above-identified application was made or authorized to be made by me. 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. I believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.) <input type="checkbox"/> by reason of a defective specification or drawing. <input checked="" type="checkbox"/> by reason of the patentee claiming more or less than he had the right to claim in the patent. <input type="checkbox"/> by reason of other errors.			

[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. 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 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.

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.

REISSUE APPLICATION DECLARATION BY THE ASSIGNEE		Docket Number (Optional) 2001P00413											
<p>At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, a claim that the application seeks to broaden must be identified and the box below must be checked:</p> <p>The error in the patent is caused by the patentee claiming more than he had a right to claim in the patent. (continued on attached sheet)</p> <p style="text-align: center;">[Attach additional sheets, if needed.]</p> <p><input checked="" type="checkbox"/> The application for the original patent was filed under 37 CFR 1.46 by the assignee of the entire interest.</p>													
<p>I hereby appoint:</p> <p><input checked="" type="checkbox"/> Practitioners associated with Customer Number: 24737</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> Practitioner(s) named below:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 50%;">Name</th> <th style="width: 50%;">Registration Number</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>				Name	Registration Number								
Name	Registration Number												
<p>as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.</p>													
<p>Correspondence Address: Direct all communications about the application to:</p> <p><input checked="" type="checkbox"/> The address associated with Customer Number: 24737</p> <p style="text-align: center;">OR</p>													
<input type="checkbox"/> Firm or Individual Name													
Address													
City	State	Zip											
Country													
Telephone		Email											
WARNING:													
<p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p>													
Signature /Michael E. Marion/		Date (Optional) March 5, 2014											
Full name of person signing (given name, family name) Michael E. Marion													
Address of Assignee P.O. Box 3001, Briarcliff Manor, NY 10510													

ADDITIONAL STATEMENT OF ERROR UPON WHICH REISSUE IS BASED

The patentee believes the original Patent to be wholly or partly inoperative or invalid by reason of the patentee claiming more than the patentee had the right to claim in the Patent. Specifically, the error in the Patent is caused by the omission of a narrower claim from the Patent that renders the Patent partly inoperative by failing to protect the disclosed invention to the full extent allowed by law.

The patentee respectfully asserts that the error is corrected by an amendment that adds at least one dependent claim, for example claim 8, which protects the disclosed invention in accordance with the specification of the Patent, thus improving on the state of the art. For example, claim 8 is added to recite that "the means for switching to a second state comprises a means for detecting a sliding across the keypad from the first key selection to the second key selection." Support for the subject matter of the claim is provided by the Patent, in the accompanying description for example contained in col. 3, line 66 through col. 4, line 5. Previously the patentee had neglected, without deceptive intent, to protect this disclosed invention in accordance with the specification of the Patent.

Further, the patentee has elected to amend claim 1 for example to recite that (e.g., see, Patent, FIGs. 1-5 and the accompanying description contained in col. 5, line 65 through col. 6, line 19, changes to the claim element indicated with underlining showing additions) "in the default state, returning the primary character as an input character in response to selection of the at least one key for a period shorter than a predetermined time period; switching to a second state after detecting a first key selection of the at least one key for a period longer than a predetermined time period; in the second state, displaying each of the secondary characters associated ..." Patentee has also elected to amend claim 1 for example for better conformance to U.S. practice such as clarifying antecedence language where for example, "selecting for input the secondary character ..." is clarified as "selecting for the input character the secondary character ..."

No new matter is added by this amendment in this reissue application. All errors in the Patent being corrected in the present reissue application up to the time of filing this oath/declaration that are not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the patentee.

Electronic Acknowledgement Receipt

EFS ID:	18382342
Application Number:	13955345
International Application Number:	
Confirmation Number:	6652
Title of Invention:	TEXT ENTRY METHOD AND DEVICE THEREFOR
First Named Inventor/Applicant Name:	Matthew J. Bickerton
Customer Number:	24737
Filer:	Gregory L. Thorne
Filer Authorized By:	
Attorney Docket Number:	2001P00413US01
Receipt Date:	05-MAR-2014
Filing Date:	31-JUL-2013
Time Stamp:	18:28:25
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	Miscellaneous Incoming Letter	2001PF00413US01_reissue_repl ly_03_05_14.pdf	40625 <small>917999b28892c72758819dcaae08705234f e72d5</small>	no	2

Warnings:

Information:

2	Oath or Declaration filed	2001PF00413US01_reissue_de c_complete_03_05_14.pdf	175820 0c0949354d3d4002de5b6f412c8f55a950 1004	no	3
Warnings:					
Information:					
Total Files Size (in bytes):				216445	
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

24737 7590 03/12/2014
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
WONG, ALBERT KANG

ART UNIT 2689
PAPER NUMBER

DATE MAILED: 03/12/2014

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/955,345 07/31/2013 Matthew J. Bickerton 2001P00413US01 6652

TITLE OF INVENTION: TEXT ENTRY METHOD AND DEVICE THEREFOR

Table with 7 columns: 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 06/12/2014

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)

24737 7590 03/12/2014
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
 P.O. BOX 3001
 BRIARCLIFF MANOR, NY 10510

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.
13/955,345	07/31/2013	Matthew J. Bickerton	2001P00413US01	6652

TITLE OF INVENTION: TEXT ENTRY METHOD AND DEVICE THEREFOR

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	06/12/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
WONG, ALBERT KANG	2689	341-022000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "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.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) The names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(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</p> <p>_____ 3</p>
--	---

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> 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).</p>
---	---

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 undiscouted 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
United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/955,345	07/31/2013	Matthew J. Bickerton	2001P00413US01	6652

24737 7590 03/12/2014
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P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

WONG, ALBERT KANG

ART UNIT PAPER NUMBER

2689

DATE MAILED: 03/12/2014

Determination of Patent Term Extension or Adjustment under 35 U.S.C. 154 (b)

A reissue patent is for "the unexpired part of the term of the original patent." See 35 U.S.C. 251. Accordingly, the above-identified reissue application is not eligible for Patent Term Extension or Adjustment under 35 U.S.C. 154(b).

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. 13/955,345	Applicant(s) BICKERTON, MATTHEW J.	
	Examiner ALBERT WONG	Art Unit 2689	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 application filed 7/31/13.
 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 1-16. 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. 10/156,409.
 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)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material 4. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Examiner's Amendment/Comment 6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 7. <input type="checkbox"/> Other _____ |
|---|---|

1. The present application is being examined under the pre-AIA first to invent provisions. The application is a reissue of application 10/156,409, Patent 6,885,318, filed May 28, 2002 which claims foreign priority to UK application 0116083.7, filed June 30, 2001. Claims 1-16 are pending.

2. Claims 1-16 are allowed.

3. The following is an examiner's statement of reasons for allowance: The claims recite an apparatus, a method of operating the apparatus, and a computer program product for executing the method wherein the device displays a default character associated with a key when the key is pressed for a period shorter than a predetermined time and when the key is pressed for a longer period secondary characters are displayed which are selected by a second key pressing, wherein the keyboard returns to the default state after the second key pressing. Such a combination is not taught, suggested, or made obvious by the prior art of record..

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."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT WONG whose telephone number is (571)272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Mehmood can be reached on 571-272-2976. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 13/955,345
Art Unit: 2689

Page 3

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.

/ALBERT WONG/
Primary Examiner, Art Unit 2689

February 2, 2014

Notice of References Cited	Application/Control No. 13/955,345	Applicant(s)/Patent Under Reexamination BICKERTON, MATTHEW J.	
	Examiner ALBERT WONG	Art Unit 2689	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-4,099,246	07-1978	Osborne et al.	708/146
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
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O					
P					
Q					
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S					
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*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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V	
W	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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Issue Classification 	Application/Control No. 13955345	Applicant(s)/Patent Under Reexamination BICKERTON, MATTHEW J.
	Examiner ALBERT WONG	Art Unit 2689

<input checked="" type="checkbox"/> Claims renumbered in the same order as presented by applicant																<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original						
	1																				
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	16																				

NONE		Total Claims Allowed:	
		16	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/ALBERT WONG/ Primary Examiner, Art Unit 2689	02/02/2014	1	1
(Primary Examiner)	(Date)		



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CONFIRMATION NO. 6652

SERIAL NUMBER 13/955,345	FILING or 371(c) DATE 07/31/2013 RULE	CLASS 341	GROUP ART UNIT 2689	ATTORNEY DOCKET NO. 2001P00413US01		
APPLICANTS						
INVENTORS Matthew J. Bickerton, Bletchingley, UNITED KINGDOM;						
** CONTINUING DATA ***** This application is a REI of 10/156,409 05/28/2002 PAT 6885318						
** FOREIGN APPLICATIONS ***** UNITED KINGDOM 0116083.7 06/30/2001						
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 08/30/2013						
Foreign Priority claimed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	35 USC 119(a-d) conditions met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Met after Allowance	STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWINGS 6	TOTAL CLAIMS 16	INDEPENDENT CLAIMS 3
Verified and Acknowledged	/ALBERT KANG WONG/ Examiner's Signature	Initials				
ADDRESS PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510 UNITED STATES						
TITLE TEXT ENTRY METHOD AND DEVICE THEREFOR						
FILING FEE RECEIVED 3180	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Matthew J. Bickerton	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	2001P00413US01	

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	5128672		1992-07-07	KAEHLER	
	2	6009444		1999-12-28	CHEN	
	3	6271835	B1	2001-08-07	HOEKSMAN	
	4	3967273		1976-06-29	KNOWLTON	
	5	4737980		1988-04-12	CURTIN ET AL	
	6	4999795		1991-03-12	LAPEYRE	
	7	5124940		1991-06-23	LAPEYRE	
	8	5818437		1998-10-06	GROVER ET AL	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Matthew J. Bickerton	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	2001P00413US01	

	9	5952952		1999-09-14	CHOI ET AL	
	10	6016538		2000-01-18	GUTTAG ET AL	
	11	6169538	B1	2001-01-02	NOWLAN ET AL	
	12	6359572	B1	2002-03-19	VALE	
	13	6473006	B1	2002-10-29	YU ET AL	

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	1	200214996	WO	A1	2002-02-21	MOELGAARD		<input type="checkbox"/>

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
	First Named Inventor	Matthew J. Bickerton		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		2001P00413US01	

	2	07200120	JP	A	1995-08-04	KATSUYASU		<input type="checkbox"/>
	3	4127310	JP		1992-04-28	UEDA		<input type="checkbox"/>
	4	04999794	JP	B2	2012-08-15	ARAI		<input type="checkbox"/>
	5	0889388	EP	A1	1999-07-01	LU		<input type="checkbox"/>

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Examiner Signature	/Albert Wong/ (02/02/2014)	Date Considered	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Matthew J. Bickerton	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	2001P00413US01	

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.

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

None

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	/Michael E. Belk/	Date (YYYY-MM-DD)	2013-07-25
Name/Print	Michael E. Belk	Registration Number	33,357

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.**

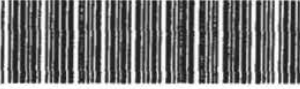
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to 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.
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Search Notes 	Application/Control No. 13955345	Applicant(s)/Patent Under Reexamination BICKERTON, MATTHEW J.
	Examiner ALBERT WONG	Art Unit 2689

CPC- SEARCHED		
Symbol	Date	Examiner
h03k 17/94; g06f 15/02, 3/0238	2/3/14	AKW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
341	20, 22	2/3/14	AKW
345	168		
379	368		
400	486		
708	131, 145, 146		

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search terms: keyboard, multi-function, keys, default, press, duration, time, timer, phone, menu	2/3/14	AKW

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

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

PTO/SB/30EFS (07-09)
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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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	13955345	Filing Date	2013-07-31	Docket Number (if applicable)	2001P00413US01	Art Unit	2689
First Named Inventor	Matthew J. Bickerton			Examiner Name	Albert Kang Wong		
This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).							
<input type="checkbox"/> Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked. <input type="checkbox"/> Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____ <input type="checkbox"/> Other _____							
<input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Amendment/Reply <input checked="" type="checkbox"/> Information Disclosure Statement (IDS) <input type="checkbox"/> Affidavit(s)/ Declaration(s) <input type="checkbox"/> Other _____							
MISCELLANEOUS							
<input type="checkbox"/> Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required) <input type="checkbox"/> Other _____							
FEES							
<input checked="" type="checkbox"/> The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed. The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 141270							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
<input checked="" type="checkbox"/> Patent Practitioner Signature <input type="checkbox"/> Applicant Signature							

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

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Approved for use through 07/31/2012. OMB 0851-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Signature of Registered U.S. Patent Practitioner			
Signature	/Michael E. Belk/	Date (YYYY-MM-DD)	2014-03-18
Name	Michael E. Belk	Registration Number	33357

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

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13955345
	Filing Date	2013-07-31
	First Named Inventor	Matthew J. Bickerton
	Art Unit	2689
	Examiner Name	Albert Kang Wong
	Attorney Docket Number	2001P00413US01

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	1	5798716	A	1998-08-25	DAVIS	
	2	6043760	A	2000-03-28	LAKKONEN	
	3	6130628	A	2000-10-10	SCHNEIDER-HUFSCHMIDT ET AL	
	4	6295052	B1	2001-09-25	KATO ET AL	
	5	5956021	A	1999-09-21	KUBOTA ET AL	
	6	6686902	A1	2002-04-11	LEE	
	7	5861823	A	1999-01-19	STRAUCH ET AL	
	8	6271835	B1	2001-08-07	HOEKSMAS	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13955345
	Filing Date	2013-07-31
	First Named Inventor	Matthew J. Bickerton
	Art Unit	2689
	Examiner Name	Albert Kang Wong
	Attorney Docket Number	2001P00413US01

9	6016142	A	2000-01-18	CHANG ET AL	
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	1	2001125720	JP	A	2001-05-11	NI ET AL		<input checked="" type="checkbox"/>
	2	0934891	JP	A	1997-02-07	ENDO		<input checked="" type="checkbox"/>
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13955345
	Filing Date		2013-07-31
	First Named Inventor	Matthew J. Bickerton	
	Art Unit	2689	
	Examiner Name	Albert Kang Wong	
	Attorney Docket Number	2001P00413US01	

1	TLS2200 THERMAL TRANSFER PRINTER USER'S GUIDE, 2000 BRADY WORLDWIDE, INC. 93 PAGES	<input type="checkbox"/>
2	MASUI, "AN EFFICIENT TEXT INPUT METHOD FOR PEN-BASED COMPUTERS", PROCEEDINGS OF THE ACM CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEM, APRIL 1998, PAGES 328-335	<input type="checkbox"/>
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13955345
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	First Named Inventor	Matthew J. Bickerton
	Art Unit	2689
	Examiner Name	Albert Kang Wong
	Attorney Docket Number	2001P00413US01

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.

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

None

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	/Michael E. Belk/	Date (YYYY-MM-DD)	2014-03-18
Name/Print	Michael E. Belk	Registration Number	33,357

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(21) 出願番号	特願平10-227000	(73) 特許権者	000002185 ソニー株式会社 東京都港区港南1丁目7番1号
(22) 出願日	平成10年8月11日(1998.8.11)	(74) 代理人	100094053 弁理士 佐藤 隆久
(65) 公開番号	特開2000-56912(P2000-56912A)	(72) 発明者	坂田 雅章 神奈川県横浜市保土ヶ谷区神戸町134番 地 ソニー・エルエスアイ・デザイン株式 会社内
(43) 公開日	平成12年2月25日(2000.2.25)	審査官	藤塚 隆
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(54) 【発明の名称】 文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体

(57) 【特許請求の範囲】

【請求項1】

特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であって、

文字情報を格納する文字情報格納手段と、

文字情報を一覧表示するための文字一覧表示手段や、文字情報の任意の文字における少なくとも1つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、
を有し、

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力装置。

【請求項2】

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文字種別は、日本語を入力する場合には、清音、濁音、半濁音、拗音または促音と、全角平仮名、半角平仮名、全角片仮名または半角片仮名との組み合わせであり、それ以外の言語を入力する場合には、大文字及び小文字である

請求項 1 に記載の文字入力装置。

【請求項 3】

文字種別表示手段に表示される各文字種別毎の文字は、それぞれ縦方向、横方向又は方眼状に配列される

請求項 1 に記載の文字入力装置。

【請求項 4】

指示手段は、タブレットに対して指示するポインティングデバイス又はマウスポインタである

請求項 1 に記載の文字入力装置。

【請求項 5】

特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であって、

文字情報を格納する文字情報格納手段と、

文字情報を一覧表示するための第 1 文字一覧表示手段や、文字情報の任意の文字における少なくとも 1 つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、

を有し、

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための第 1 文字一覧表示手段を表示手段に表示し、

第 1 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、第 1 文字一覧表示手段より詳細な文字情報を表す第 2 文字一覧表示手段を表示手段に表示し、

第 2 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別の文字が指示手段によって指示されてその位置から離されると、文字種別表示手段において離れた位置に表示されている文字種別に該当する文字情報を第 1 文字一覧表示手段に表示する

ことを特徴とする文字入力装置。

【請求項 6】

特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であって、

文字情報を格納する文字情報格納手段と、

文字情報を一覧表示するための文字一覧表示手段や、文字情報の任意の文字における少なくとも 1 つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、

を有し、

特定の文字種別に該当する複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

表示手段に表示された文字一覧表示手段の内の任意の文字が指示手段によって予め決められた時間指示され続けると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段を摺動するように文字種別表示手段の内の任意の文字を指示手段によって指示され、その位置から離されると、文字種別表示手段において離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力装置。

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【請求項 7】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力方法。

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【請求項 8】

文字種別は、日本語を入力する場合には、清音、濁音、半濁音、拗音または促音と、全角平仮名、半角平仮名、全角片仮名または半角片仮名との組み合わせであり、それ以外の言語を入力する場合には、大文字及び小文字である

請求項 7 に記載の文字入力方法。

【請求項 9】

文字種別表示手段に表示される各文字種別毎の文字は、それぞれ縦方向、横方向又は方眼状に配列される

請求項 7 に記載の文字入力方法。

【請求項 10】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための第 1 文字一覧表示手段を表示手段に表示し、

第 1 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、第 1 文字一覧表示手段より詳細な文字情報を表す第 2 文字一覧表示手段を表示手段に表示し、

第 2 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別の文字が指示手段によって指示されてその位置から離されると、文字種別表示手段において離れた位置に表示されている文字種別に該当する文字情報を第 1 文字一覧表示手段に表示する

ことを特徴とする文字入力方法。

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【請求項 11】

特定の文字種別に該当する複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

表示手段に表示された文字一覧表示手段の内の任意の文字が指示手段によって予め決められた時間指示され続けると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段を摺動するように文字種別表示手段の内の任意の文字が指示手段によって指示され、その位置から離されると、文字種別表示手段において離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

ことを特徴とする文字入力方法。

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【請求項 12】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

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文字入力機能を有するプログラムを記録したことを特徴とする情報記録媒体。

【請求項 13】

文字種別は、日本語を入力する場合には、清音、濁音、半濁音、拗音または促音と、全角平仮名、半角平仮名、全角片仮名または半角片仮名との組み合わせであり、それ以外の言語を入力する場合には、大文字及び小文字である文字入力機能を有するプログラムを記録した請求項 12 に記載の情報記録媒体。

【請求項 14】

文字種別表示手段に表示される各文字種別毎の文字は、それぞれ縦方向、横方向又は方眼状に配列される文字入力機能を有するプログラムを記録した請求項 12 に記載の情報記録媒体。

【請求項 15】

特定の文字種別に該当する文字で構成される複数の文字情報を表示するための第 1 文字一覧表示手段を表示手段に表示し、

第 1 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、第 1 文字一覧表示手段より詳細な文字情報を表す第 2 文字一覧表示手段を表示手段に表示し、

第 2 文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段の内の任意の文字種別の文字が指示手段によって指示されてその位置から離されると、文字種別表示手段において離れた位置に表示されている文字種別に該当する文字情報を第 1 文字一覧表示手段に表示する

文字入力機能を有するプログラムを記録したことを特徴とする情報記録媒体。

【請求項 16】

特定の文字種別に該当する複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、

表示手段に表示された文字一覧表示手段の内の任意の文字が指示手段によって予め決められた時間指示され続けると、指示された文字に対応する少なくとも 1 つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、

文字種別表示手段を摺動するように文字種別表示手段の内の任意の文字が指示手段によって指示され、その位置から離されると、文字種別表示手段において離れた位置に表示していた文字の文字種別に該当する文字情報を文字一覧表示手段に表示する

文字入力機能を有するプログラムを記録したことを特徴とする情報記録媒体。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】

この発明は、文字を入力するための文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体に関するものである。

【0002】

【従来の技術】

近年、情報産業の発達によって様々な情報の活用がなされている。例えば、業務や個人的な情報を管理して、さらにこの情報を利用するためには、例えばパーソナルコンピュータや情報携帯端末機器（以下略して情報機器と呼ぶ）等が利用されている。例えば前述の情報機器を一例として説明すると、この情報機器は、例えば使用者が所定のポインティングデバイスを使用して、情報機器に設けられた表示部に内蔵する所定のソフトウェアによって表示された画面が操作されることで操作される。このような画面は、通常 GUI (G r 50

aphical User Interface)と呼ばれるユーザインターフェイスが採用され、使用者が操作しやすいようになっている。このような情報機器は、性能を向上させると共に個人が携帯しやすいように小型化を図る競争が行われている。

【0003】

このように情報機器が小型化されると、当然表示部の表示面積が小さくなる。従って、所定のソフトウェアによって表示部に表示される表示物が小さくなり、GUIの操作性が低下するという欠点がある。以下、例えば表示部に表示されるものとしてソフトキーボードを一例として具体的にその欠点について説明する。尚、「ソフトキーボード」とは、文字を情報機器に入力できるキーボード機能を有するソフトウェアをいうものとする。

【0004】

【発明が解決しようとする課題】

図25～図27は、それぞれ表示部に表示される従来のソフトキーボードの表示状態を示す図である。

図25においては、ソフトキーボード106は、例えば全角平仮名表示領域107、全角片仮名表示領域108及び半角片仮名表示領域109を有する。

従って、ソフトキーボード106は、表示面積の小さな表示部に表示されると1つ1つの文字が小さくなり見づらいこと及び、平仮名及び片仮名並びに全角及び半角といったような文字種別によって大きな表示面積を必要とすることが生ずる。

【0005】

図26(A)～(C)においては、ソフトキーボード106は、図25の欠点を除去するために複数の文字種別の文字情報を1つの画面で表示することにしたものである。したがって、ソフトキーボード106は、文字情報を表示するための表示領域以外に、例えば全角平仮名ボタン106a、全角片仮名ボタン106b及び半角片仮名ボタン106cを有する。図26(A)～(C)のソフトキーボード106では、文字種別としての全角平仮名、全角片仮名及び半角片仮名を区別して文字情報を表示するのに、使用者が各ボタンを操作する必要がある。

【0006】

図27においては、ソフトキーボード106は、図26(A)～(C)の文字情報の表示領域の面積を小さくするために濁点、半濁点を付加したり、又は例えばローマ字等を入力できるソフトキーボードにおいて大文字表示を小文字表示又は、小文字表示を大文字表示にするための入力部(それぞれ図27の濁音キー106e及び半濁音キー106f、又は小文字ボタン106b)を設けている。このようなソフトキーボード106では、操作者が一々所望の文字種別の文字情報に切り替えなければならない。

【0007】

そこでこの発明は上記課題を解消し、簡単且つ正確に文字入力を行うことができ、文字一覧表示手段の表示面積の小さな文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体を提供することを目的としている。

【0008】

【課題を解決するための手段】

上記目的は、この発明にあつては、特定の文字種別に該当する文字で構成される複数の文字情報をそれぞれ表示手段に表示した状態で、文字情報の任意の文字を指示するための指示手段によって、所望の文字を指示して入力するための文字入力装置であつて、文字情報を格納する文字情報格納手段と、文字情報を一覧表示するための文字一覧表示手段や、文字情報の任意の文字における少なくとも1つの文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示させるための文字情報表示手段と、を有し、特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段を表示手段に表示し、文字一覧表示手段の内の任意の文字が指示手段によって指示されると、指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段を表示手段に表示し、文字種別表示手段の内の任意の文字種別に該当する文字を指示手段で指示して離すと、離れた位置に表示していた文字の文字種別に

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該当する文字情報を文字一覧表示手段に表示することを特徴とする文字入力装置により、達成される。

【0009】

この発明では、表示手段には、特定の文字種別に該当する文字で構成される複数の文字情報を表示するための文字一覧表示手段が表示される。使用者は、指示手段によって文字一覧表示手段の任意の文字を指示する。すると、表示手段には、指示手段によって指示された文字に対応する少なくとも1つの他の文字種別に該当する文字を表示するための文字種別表示手段が表示される。使用者は、文字種別表示手段の所望の文字を指示手段によって指示して指示手段を離す。これにより、表示手段には、文字種別表示手段において離れた位置に表示されていた文字の文字種別に該当する文字情報が表示される。

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【0010】

【発明の実施の形態】

以下、この発明の好適な実施の形態を添付図面に基づいて詳細に説明する。

なお、以下に述べる実施の形態は、この発明の好適な具体例であるから、技術的に好ましい種々の限定が付されているが、この発明の範囲は、以下の説明において特にこの発明を限定する旨の記載がない限り、これらの形態に限られるものではない。

【0011】

以下の説明中、「文字種別」とは、日本語を入力する場合には、直音、濁音、半濁音、拗音、促音、慣用特殊文字、平仮名及び片仮名並びにこれらと全角及び半角の組み合わせを示し、それ以外の言語（例えば英語等）を入力する場合には、大文字及び小文字を示す。「文字情報」とは、文字種別毎の複数の文字を示す。以下の説明で、情報機器において文字入力するためにキーボードをソフトウェアで表示するが、「キー」とは、通常のキーボードのキーに該当するソフトウェアによって表示されたのキー（ソフトキー）を示すものとする。

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【0012】

第1実施形態

図1は、この発明の第1実施形態としての文字入力装置に対して文字を入力する様子を示す斜視図である。

文字入力装置1は、例えば携帯型の情報を管理するための情報機器である。文字入力装置1は、筐体としての本体1a、本体1aの一表面に設けられたタブレット7（指示手段）、タブレット7に密着するようにタブレット7及び本体1aの間に設けられた表示部5（表示手段）を有する。上記表示部5は、例えば液晶ディスプレイであり、後述する文字入力ソフトウェアとしてのソフトキーボード6（文字入力機能を有するプログラムの一部としての文字一覧表示手段）が表示される。上記本体1aは、その内部に後述する図2のような制御回路8を有する。

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【0013】

図2は、図1の文字入力装置における制御回路の簡略化した構成例を示す構成図である。制御回路8は、制御部9、記憶部11、外部記憶部13、タブレット7（指示手段）及び表示部5（表示手段）を有する。尚、制御回路8は、タブレット7の代わりに、表示部5のポインティングデバイスとしてのいわゆるマウス等を備えているような構成であっても良い。

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【0014】

上記制御部9は、例えばCPU（中央演算処理装置）である。制御部9は、記憶部11、外部記憶部13、タブレット7及び表示部5と接続されている。制御部9は、記録部11に記録された情報等に基づいて、文字入力装置1全体を制御している。

【0015】

上記記憶部11は、例えばRAM（Random Access Memory）やROM（Read Only Memory）である。記憶部11は、ソフトキーボード6（及び基本ソフト等）が動作するための作業領域である。

【0016】

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上記外部記憶部13は、例えばハードディスクである。外部記憶部13は、上述したソフトキーボード6を格納する。ソフトキーボード6は、起動されると、例えば制御部9によって記憶部11上で動作する。ソフトキーボード6についての説明は、後述する。

【0017】

上記タブレット7は、例えばペンタッチ型のタッチパネルである。このタブレット7は、ユーザが例えばペン型であって先の尖った形状をしたポインティングデバイス3（指示手段）にてタブレット7の所定の位置に触れて、上下略2層の抵抗層が接触することにより所定の電極に生ずる電圧が変化し、後述する図2の制御部9が、その位置を認識する入力装置である。タブレット7は透明な部材であり、その下層には表示部5が配置されている。これにより、ユーザは、表示部5の表示を透明なタブレット7を介して視認できるようになっている。

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【0018】

図3は、図1のソフトキーボードの機能例を図示した機能ブロック図である。ソフトキーボード6は、ドラッグメニュー情報テーブル17（文字情報格納手段）及び文字情報表示手段19を有する。以下の説明で「ドラッグ」とは、例えば使用者が、ポインティングデバイス3の先端3aを表示部5に表示されたソフトキーボード6等に接触させた状態で、タブレット7の表面上を摺動させることをいうものとする。

【0019】

上記ドラッグメニュー情報テーブル17は、例えば文字種別毎の文字を格納する。ドラッグメニュー情報テーブル17は、後述する文字情報表示手段19によって図8のようなドラッグメニュー18（文字種別表示手段）が表示された際にそのドラッグメニュー18を表示するための情報（以下、ドラッグメニュー情報という）が読み出される。ドラッグメニュー情報の一例としては、図4のような形式となっている。つまり、タブレット7がタッチ（以下、ポインティングデバイス3によってソフトキーボード6を指示したことをいう）された際のソフトキーボード6において押されたキーに対応する文字種別毎の文字が格納されている。

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【0020】

上記文字情報表示手段19は、例えば図2の制御部9の制御によって記憶部11を作業領域として使用するソフトウェアである。文字情報表示手段19は、図1の表示部5にソフトキーボード6を表示する際にドラッグメニュー情報テーブル17を検索して、例えば図6(A)～(C)のように文字種別毎に文字情報を表示させる。文字情報表示手段19は、ソフトキーボード6が表示部5に表示された状態（図7）で使用者がタブレット7をタッチして（この位置を第1位置Aと呼ぶ）、例えば図8のようなドラッグメニュー18を表示させる際にドラッグメニュー情報テーブル17を検索してドラッグメニュー情報を表示させる。

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【0021】

文字情報表示手段19は、ドラッグメニュー18として図8のような画面を表示部5に表示する。このドラッグメニュー18は、ポインティングデバイス3によってタッチした文字に基づいて図4のドラッグメニュー情報テーブル17を検索して該当する全ての文字種別に該当する文字を表示する。ドラッグメニュー18は、好ましくは図4のドラッグメニュー情報テーブル17を検索して、図8のように各文字種別（図4の表示するドラッグメニューの選択枝）毎にいくつかの文字単位で区分されていると良い。これは、使用者がソフトキーボード6を使用する際に文字種別毎の文字を認識しやすいためである。

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【0022】

以上文字入力装置の構成例について説明したが、次にその動作について説明する。図5は、図1の文字入力装置における文字情報表示手段の詳細な動作例を示すフローチャートである。

以下の説明では、ソフトキーボード6が文字入力装置1において既に起動されている状態（図7のソフトキーボード6が図1の表示部5に表示された状態）から説明する。図5において「=」は、イコールを意味するのではなく、右辺の変数を左辺の変数に代入するこ

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とを意味している。「=」とは、左辺と右辺を比較することを意味する。また、説明中登場する図2の記憶部11上で使用される変数として、以下のものがある。

【0023】

input_key 変数 : 確定入力文字
 pressed_key 変数 : 押されたキー
 menu_done 変数 : ドラッグメニュー表示中を表すフラグ

【0024】

ソフトキーボード6が表示された状態で(ステップST1)、input_key変数に空白にし、pressed_key変数は不定状態とし、menu_done変数にfalse(ドラッグメニュー18が非表示であることを示し、trueはドラッグメニュー18が表示中であることを表す)を代入する(ステップST2)。

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【0025】

図2の制御部9は、使用者がポインティングデバイス3によってキーがタッチされたかどうかの状態を検出する。使用者によってキーがタッチされ、ドラッグメニュー18が表示されたかどうかをチェックする(ステップST4)。

【0026】

ドラッグメニュー18が表示されていないければ、キー(ソフトキー)が押されたかどうかを判断し(ステップST14)、押されていないければステップST3に戻り、押されているれば例えばpress_key変数に押されたキー(に対応するコード)を代入し(ステップST15)、このpress_key変数に基づいて図4のドラッグメニュー情報テーブル17を検索して、該当する文字を表すドラッグメニュー18を表示する(ステップST16)。そして、menu_done変数にtrueを代入し(ステップST17)、ポインティングデバイス3によって指示された文字を反転させる。

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【0027】

ドラッグメニュー18が表示されていれば、使用者がポインティングデバイス3をキーから離れたかどうかを検出する(ステップST5)。離されていないければ、ポインティングデバイス3がドラッグしたかどうかを検出し(ステップST11)、ドラッグしていないければステップST3に戻り、ドラッグしていればドラッグで抜けたキーの反転表示を中止し、ポインティングデバイス3によってドラッグで進入した領域を示すキーを反転表示する(ステップST12)。そして、進入したキー(の例えば文字コード)をpressed_key変数に代入する(ステップST13)。そして、ステップST3に進む。

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【0028】

離されていれば、input_key変数にpressed_key変数を代入して(つまり押したキーの情報を代入)、pressed_key変数に格納された(例えば文字コードに該当する)文字の文字種別(文字種)に従って、ソフトキーボード6を図6(A)~(C)のいずれかのように再表示する(ステップST7)。そして同時に、ドラッグメニュー18表示を消去し(ステップST8)、menu_done変数にfalseを代入する(ステップST9)。pressed_key変数は不定状態とし(ステップST10)、ステップST3に戻る。

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【0029】

以上が文字情報表示手段19等の内部処理を詳細に説明したものであるが、次に使用者側から見た場合の文字入力装置1の動作について説明する。

使用者は、文字を入力するソフトウェアを使用中である。使用者は、図8のように所望の文字(「ウ」又は「ヴ」等)をポインティングデバイス3によって入力しようとしている。しかし、文字入力装置1には、全角平仮名の文字種別の文字情報が表示されているので、使用者は、表示中の文字種別を変更するために、ポインティングデバイス3によって「う」をタッチする。

【0030】

ソフトキーボード6は、図7の状態から図8のようにドラッグメニュー18が表示される

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。使用者が図9(A)のようにポインティングデバイス3によってドラッグメニュー18の任意の文字をタッチすると(例えば第1位置Aからポインティングデバイス3をドラッグメニュー18をドラッグするようにして)、ソフトキーボード6に表示されている文字情報が図9(B)のようにその文字の文字種別に該当する文字情報に変更される。尚、ドラッグメニュー18を図7のように消滅させたい場合には、ドラッグメニュー18以外の部分をタッチすればよい。

【0031】

一方、例えば使用者が文字入力装置1によって英文字を入力しようとした場合には、図10のようにソフトキーボード6が表示された状態(この説明では「文字情報」が表示された状態を示す)で、入力しようとしている文字としての「n」をポインティングデバイス3でタッチすると図11のようにドラッグメニュー18が表示される。尚、図11のドラッグメニュー18では、左から全角「N」、「n」、半角「N」、「n」の順に表示されている。この表示順は、例えば図4のドラッグメニュー情報テーブル17に格納されている順番である(図4では、一例であるので日本語の文字のみを格納している)。

【0032】

使用者は、図12(A)のように全角の「N」を入力しようとしてドラッグメニュー18の「N」をタッチする。ソフトキーボード6は、図12(B)のように文字種別が全角の表示となる。

【0033】

この発明の第1実施形態によれば、簡単且つ正確に文字入力装置1に対して文字を入力することができ、各文字種別毎に文字情報を表示しない及び従来必要とされていた文字種別を切り替えるための切替手段(例えばボタン等)が不要であり、ソフトキーボード6の表示面積を従来より小さくすることができながら、GUI(Graphical User Interface)の操作性が良く、特に表示部5の表示領域が決まっている場合には特に効果がある。

【0034】

第2実施形態

図13~16は、この発明の第2実施形態としての文字入力装置のソフトキーボードの表示例を示す図である。

図13~16の文字入力装置1は、第1実施形態と同様の構成をしており、そのソフトキーボード6の日本語表示方法において、以下の点が異なる。

ソフトキーボード6の表示(第1文字一覧表示手段)は、例えば図13のように「あ」、「か」・・・、「わ」というように、50音の先頭文字のみが表示されている。使用者は、ポインティングデバイス3にて所望の文字の先頭文字をタッチして図14のような行ドラッグメニュー16(以下行メニュー16と略す、第2文字一覧表示手段)を表示させる。

【0035】

使用者は、所望の文字と同一の文字種別の文字をタッチして図15のようにドラッグメニュー18を表示させる。使用者は、図16(A)のようにポインティングデバイス3をドラッグメニュー18を摺動させて、所望の文字種別(全角の片仮名)の文字(「ヴ」)をポインティングデバイス3でタッチすると、図16(B)のように文字種別が全角の片仮名に変更される。

【0036】

この発明の第2実施形態によれば、第1実施形態の効果に加えて、さらに第1実施形態よりもソフトキーボード6の表示領域を小さくすることができる。

【0037】

第3実施形態

図17~20は、この発明の第3実施形態としての文字入力装置のソフトキーボードの表示例を示す図である。

図17~20の文字入力装置1は、第1実施形態と同様の構成をしており、そのソフトキ

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ーボード6のドラッグメニュー18の表示方法において以下の点が異なる。

【0038】

文字入力装置1の表示部5には、図17のようなソフトキーボード6が表示されている。使用者は、図18のように所望の文字をタッチして（すぐ離して）、文字を確定して入力する。

【0039】

一方、ソフトキーボード6に表示する文字種別を変更する場合には、使用者は、図19のようにポインティングデバイス3で任意の文字をタッチして一定時間経過したところでドラッグメニュー18が表示される。以下、文字種別を選択する方法は第1実施形態と同様であり、図20のように文字種別を変更して文字情報を表示することができる。

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【0040】

この発明の第3実施形態によれば、第1実施形態の効果に加えて、使用者は、ポインティングデバイス3によって文字を入力することと、ドラッグメニュー18を表示させることを明確且つ簡単にそして素速く行うことができる。

【0041】

第4実施形態

図21～23は、この発明の第4実施形態としての文字入力装置のソフトキーボードの表示例を示す図である。

図21～23の文字入力装置1は、第1実施形態と同様の構成をしており、そのソフトキーボード6のドラッグメニュー18の表示方法において第1実施形態と以下の点が異なる。

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【0042】

図21(A)のように表示されたソフトキーボード6において、使用者が、図21(B)のように所望の文字をタッチしてすぐ離すと、文字が選択されて入力される。

【0043】

ソフトキーボード6において表示されている文字種別を変更するためにドラッグメニュー18を表示させるには、図22(A)のように使用者がポインティングデバイス3を任意の文字(「う」)を指示して、そのまま図22(B)のように例えば「う」の領域を摺動させる(ドラッグさせる)と、図23のようにドラッグメニュー18が表示される。そして、このようにドラッグメニュー18を表示させて第1実施形態と同様にして表示中の文字の文字種別を変更する。尚、ポインティングデバイス3によってドラッグされる方向は、前述したものに限られずその逆であっても良いし、その領域内を摺動すればよい。

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【0044】

この発明の第4実施形態によれば、第3実施形態の効果と同様の効果を上げることができる。

【0045】

ところでこの発明は上述した実施形態に限定されるものではない。

上述した実施形態では、ドラッグメニュー18は、図24(A)のように略同一文字について一直線上に配列されているが、例えば図24(B)のように縦方向に配列させてもよい。また、ドラッグメニュー18は、図24(C)のように文字を文字種別単位に横に並べてさらに文字種別毎の文字を縦に配置させるような表示方法でも良い。このように配列することで、狭い範囲に文字を配列することができる。また、図24(D)のように文字種別単位に文字を縦に配列して、各文字種別単位を横方向に配置させるようにしても良い。このように配列することで、狭い範囲に文字を配列することができる。尚、上述したような文字入力機能を有するプログラム(ソフトキーボード6)は、例えばコンパクトディスクやフロッピーディスク(フレキシブルディスク)に格納されているような形態でも良いことはいうまでもない。

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【0046】

【発明の効果】

以上説明したように、この発明によれば、簡単且つ正確に文字入力を行うことができ、文

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字一覧表示手段の表示面積の小さな文字入力装置、文字入力方法及び文字入力機能を有するプログラムを記録した情報記録媒体を提供することができる。

【図面の簡単な説明】

【図 1】この発明の第 1 実施形態としての文字入力装置に対して文字を入力する様子を示す斜視図。

【図 2】図 1 の文字入力装置における制御回路の簡略化した構成例を示す構成図。

【図 3】図 1 のソフトキーボードの機能例を図示した機能ブロック図。

【図 4】図 3 のドラッグメニュー情報テーブルの内容を示す図。

【図 5】図 1 の文字入力装置における文字情報表示手段の詳細な動作例を示すフローチャート。

【図 6】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 7】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 8】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 9】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 10】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 11】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 12】図 1 の表示部に表示されるソフトキーボードの表示例を示す図。

【図 13】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 14】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 15】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 16】この発明の第 2 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 17】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 18】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 19】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 20】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 21】この発明の第 3 実施形態としての文字入力装置のソフトキーボードの表示例を示す図。

【図 22】図 21 のソフトキーボードの部分拡大図。

【図 23】ドラッグメニューが表示された様子を示す図。

【図 24】ドラッグメニューの表示の変形例を示す図。

【図 25】表示部に表示される従来のソフトキーボードの表示状態を示す図。

【図 26】表示部に表示される従来のソフトキーボードの表示状態を示す図。

【図 27】表示部に表示される従来のソフトキーボードの表示状態を示す図。

【符号の説明】

1・・・文字入力装置、3・・・ポインティングデバイス、5・・・表示部、6・・・ソフトキーボード（文字一覧表示手段、第 1 文字一覧表示手段）、7・・・タブレット、15・・・文字情報テーブル（文字情報格納手段）、16・・・行ドラッグメニュー（第 2 文字一覧表示手段）、17・・・ドラッグメニュー情報テーブル（文字情報格納手段）、18・・・ドラッグメニュー（文字種別表示手段）、19・・・文字情報表示手段

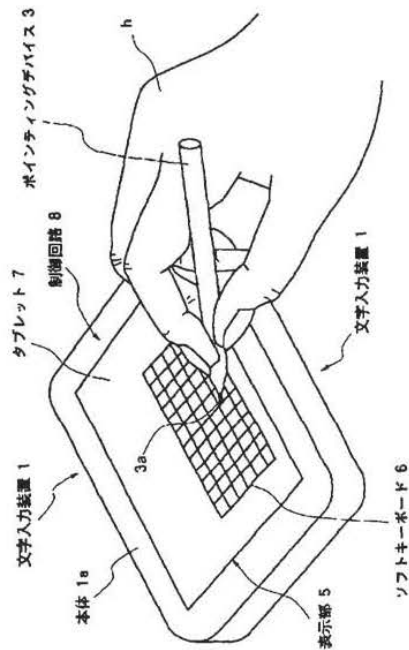
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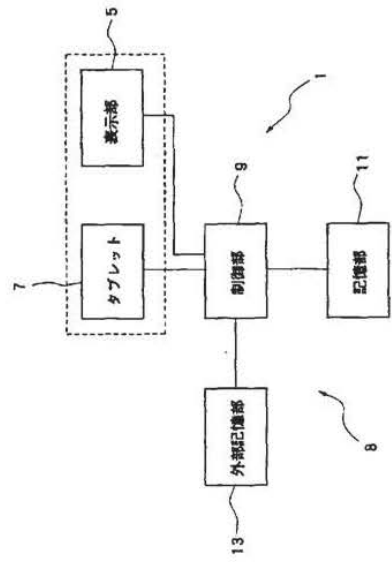
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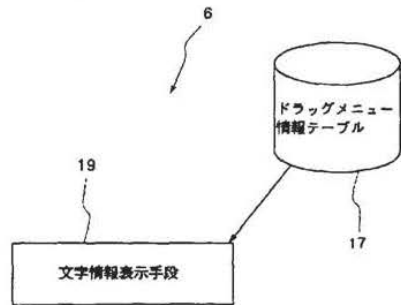
【図1】



【図2】



【図3】

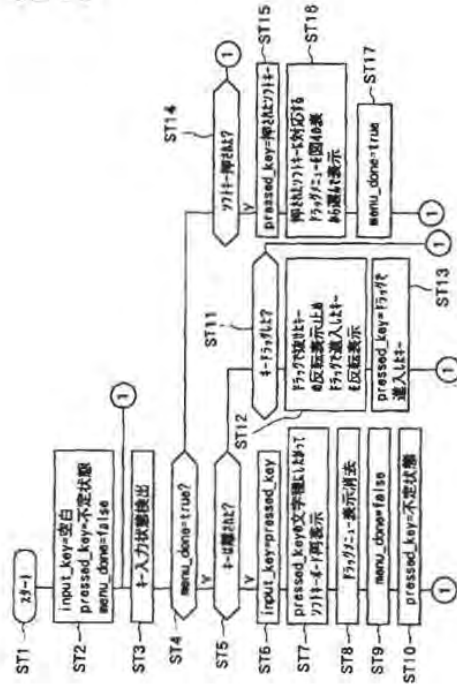


【図4】

ドラッグメニュー情報テーブル

タッチされたキー	表示するドラッグメニューの選択数		
	全角平仮名	全角片仮名	半角片仮名
あア	ア	ア	ア
いイ	イ	イ	イ
うウ	ウ	ウ	ウ
えエ	エ	エ	エ
おオ	オ	オ	オ
かカ	カ	カ	カ
きキ	キ	キ	キ
くク	ク	ク	ク
けケ	ケ	ケ	ケ
こコ	コ	コ	コ
さサ	サ	サ	サ
しシ	シ	シ	シ
すス	ス	ス	ス
せセ	セ	セ	セ
そソ	ソ	ソ	ソ
たタ	タ	タ	タ
ちチ	チ	チ	チ
つツ	ツ	ツ	ツ
てテ	テ	テ	テ
とト	ト	ト	ト
なナ	ナ	ナ	ナ
にニ	ニ	ニ	ニ
ぬヌ	ヌ	ヌ	ヌ
のノ	ノ	ノ	ノ
はハ	ハ	ハ	ハ
ひヒ	ヒ	ヒ	ヒ
ふフ	フ	フ	フ
へヘ	ヘ	ヘ	ヘ
ほホ	ホ	ホ	ホ
まマ	マ	マ	マ
みミ	ミ	ミ	ミ
むム	ム	ム	ム
めメ	メ	メ	メ
もモ	モ	モ	モ
やヤ	ヤ	ヤ	ヤ
ゆユ	ユ	ユ	ユ
よヨ	ヨ	ヨ	ヨ
らラ	ラ	ラ	ラ
りリ	リ	リ	リ
るル	ル	ル	ル
れレ	レ	レ	レ
ろロ	ロ	ロ	ロ
わワ	ワ	ワ	ワ
をウ	ウ	ウ	ウ
んン	ン	ン	ン

【図 5】



【図 6】

(A) 全角平仮名

わ	ら	や	あ	は	な	た	か	あ
せ	り	あ	ひ	に	ち	し	き	い
い	ろ	ゆ	り	あ	ゆ	す	く	う
ー	ね	あ	へ	な	て	せ	け	え
ら	お	ほ	の	と	そ	こ	お	

(B) 全角片仮名

ワ	ラ	ヤ	マ	ハ	ナ	タ	カ	ア
セ	リ	ア	ヒ	ニ	チ	シ	キ	イ
イ	ロ	ユ	ム	フ	ユ	ス	ク	ウ
ー	レ	エ	ヘ	ネ	テ	セ	ケ	エ
ラ	オ	ホ	ノ	ト	ソ	コ	オ	

(C) 半角片仮名

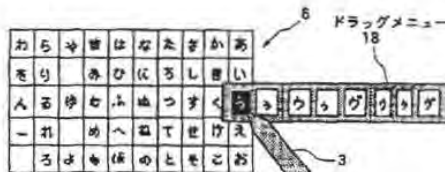
ワ	ラ	ヤ	マ	ハ	ナ	タ	カ	ア
セ	リ	ア	ヒ	ニ	チ	シ	キ	イ
イ	ロ	ユ	ム	フ	ユ	ス	ク	ウ
ー	レ	エ	ヘ	ネ	テ	セ	ケ	エ
ラ	オ	ホ	ノ	ト	ソ	コ	オ	

【図 7】

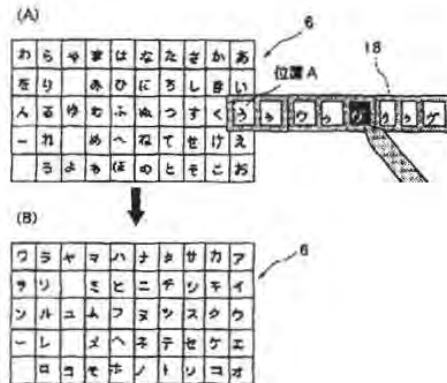
(A) 全角平仮名

わ	ら	や	あ	は	な	た	か	あ
せ	り	あ	ひ	に	ち	し	き	い
い	ろ	ゆ	り	あ	ゆ	す	く	う
ー	ね	あ	へ	な	て	せ	け	え
ら	お	ほ	の	と	そ	こ	お	

【図 8】



【図 9】



【図 10】

(A) 半角片仮名

a	b	c	d	e	f	g	
h	i	j	k	l	m	n	
o	p	q	r	s	t	u	
v	w	x	y	z			