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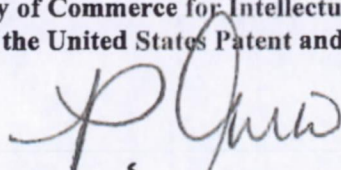RECORDS OF THIS OFFICE OF THE FILE WRAPPER AND CONTENTS
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Enclosed for filing is the patent application of Inventor(s):
Matthew J. BICKERTON

For: TEXT ENTRY METHOD AND DEVICE THEREFOR

ENCLOSED ARE:
[X] Appointment of Associates;
[X] Information Disclosure Statement, Form PTO-1449 and copies of
      documents listed therein;
[ ] Preliminary Amendment;
[X] Specification (13 Pages of Specification, Claims, & Abstract);
[X] Declaration and Power of Attorney:
     (1 Page of a [X] fully executed   [ ] unsigned Declaration);
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[X] Certified copy of GREAT BRITAIN application Serial No.
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FEE COMPUTATION

CLAIMS AS FILED				
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[ ] Amend the specification by inserting before the first line
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DESCRIPTION

TEXT ENTRY METHOD AND DEVICE THEREFOR

5   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 10 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 15 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 20 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 25 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 30 "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

5   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

10   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 US patent number 5,128,672 wherein the device comprises a dynamic predictive keyboard which is graphically represented on a touch sensitive display. A user

15   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

20   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

25   quick text entry. Furthermore, the access and input of special characters is a problem unsolved by the predictive means of US5,128,672.

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

30   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

5   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

10 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

15 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

20 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

25 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

30 a touch screen, the touchscreen having an output area for displaying characters input by the user. In this embodiment the display area associated

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