

[0021] It will be appreciated that for simplicity and clarity of illustration, elements shown in the figures have not necessarily been drawn to scale. For example, the dimensions of some of the elements may be exaggerated relative to other elements for clarity. Further, where considered appropriate, reference numerals may be repeated among the figures to indicate corresponding or analogous elements.

DETAILED DESCRIPTION OF THE INVENTION

[0022] In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the embodiments of the invention. However it will be understood by those of ordinary skill in the art that embodiments of the invention may be practiced without these specific details. In other instances, well-known methods, procedures and components have not been described in detail so as not to obscure the invention.

[0023] Reference is now made to FIG. 1, which is a simplified front view of an exemplary mobile electronic device 100, and to FIG. 2, which is a simplified front view of another exemplary mobile electronic device 200. Device 100/200 may be a personal data assistant (PDA), a personal information manager (PIM), a two-way pager, a cellphone, a handheld terminal, and the like. In some embodiments, device 100/200 may be a two-way communication device with data communication capabilities having the capability to communicate with other computer systems. In some embodiments, device 100/200 may also include the capability for voice communications.

[0024] Device 100/200 may have a display 102/202. A non-exhaustive list of examples for display 102/202 includes a liquid crystal display (LCD) screen and a thin-film-transistor (TFT) LCD screen.

[0025] Device 100 may have one or more touch interfaces, including rows of touchpads 104 to allow text input. A non-exhaustive list of examples of touchpads includes, for example, capacitive touchpads and resistive touchpads. The rows may be straight or curved or have any other appropriate shape.

[0026] In the example shown in FIG. 1, a top touchpad 104 includes the letters "Q", "W", "E", "R", "T", "Y", "U", "I", "O", and "P", a middle touchpad 104 includes the letters "A", "S", "D", "F", "G", "H", "J", "K", and "L", and a bottom touchpad 104 includes the letters "Z", "X", "C", "V", "B", "N", and "M". The letters may be printed directly on the touchpad, or may be located behind or printed on the back of a substantially translucent touchpad. If desired, the letters may be evenly spaced within each touchpad. In other examples, the arrangement of letters among and within the touchpad may be different than that shown in FIG. 1. Similarly, in other examples, the number of touchpads may be different than that shown in FIG. 1. Similarly, in other examples, a single large touchpad may include more than one row of letters.

[0027] Device 200 may include one or more touch interfaces, including a touchscreen 204. A non-exhaustive list of touchscreens includes, for example, resistive touchscreens, capacitive touchscreens, projected capacitive touchscreens, infrared touchscreens and surface acoustic wave (SAW) touchscreens.

[0028] In the example shown in FIG. 2, letters are arranged in rows in touchscreen 204. The letters may be printed directly on display 202. Touchscreen 204 may be transparent and placed in front of display 202, or alternatively, touchscreen 204 may be behind display 202. If desired, the letters may be evenly spaced within each row. In other examples, the arrangement of letters among and within the rows may be different than that shown in FIG. 2. Similarly, in other examples, the number of rows of letters in the touchscreen may be different than that shown in FIG. 2.

[0029] When a user of device 100 touches one of the touchpads 104, the touchpad will determine the location of the touch on the touchpad. The way in which the location is determined and the precision of the location will likely depend on the type of touchpad. Similarly, when a user of device 200 touches touchscreen 204, the touchscreen will determine the location of the touch on the touchscreen. The way in which the location is determined and the precision of the location will likely depend on the type of touchscreen.

[0030] In one embodiment, described hereinbelow with respect to FIGS. 3 and 4, each touch results in the selection of two adjacent letters to be passed to a predictive text software module. The predictive text software module is to determine which of the two adjacent letters the user intended to enter. A force feedback system (for example, a vibrator) or an audio system may be used to provide feedback to the user to indicate to the user that the software has registered an input.

[0031] In another embodiment, described hereinbelow with respect to FIGS. 5 and 6, a touch sufficiently close to the horizontal center of a letter results in the selection of that letter, while a touch in an intermediate area between two adjacent letters results in the selection of the two adjacent letters and passing the two adjacent letters to a predictive text software module. The predictive text software module is to determine which of the two adjacent letters the user intended to enter. A force feedback system (for example, a vibrator) or an audio system may be used to provide feedback to the user to indicate to the user that the software has registered an input.

[0032] The embodiments described hereinbelow with respect to FIGS. 3-6 are applicable to device 100. They are applicable as well to device 200 if the rows of letters are spaced at a sufficient vertical distance that there is no ambiguity as to which row of letters is being touched. Further embodiments, described hereinbelow with respect to FIGS. 7 and 8, are applicable to device 200 if the rows of letters are spaced such that there is ambiguity as to which row of letters is being touched.

[0033] Reference is now made to FIGS. 3 and 4. FIG. 3 illustrates an exemplary method for determining which two adjacent letters to pass to the predictive text software module. FIG. 4 is an illustration of a virtual "T" key, a virtual "R" key and a virtual "Y" key, in accordance with some embodiments of the present invention. A touch location is received (300). If the touch location is between the horizontal centers of two adjacent letters (302), then the two adjacent letters are sent to the predictive text software module (304). For example, as shown in FIG. 4, if the touch location is between the horizontal center of "R"404 and the horizontal center of "T"406, then the letters "R" and "T"