

[0014] FIG. 2 is a flowchart depicting a process for dialing according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0015] The invention is directed to an input method and an input arrangement for a portable electronic device. Referring to FIG. 1, an input arrangement for a portable electronic device in accordance with a preferred embodiment of the invention is shown. The portable electronic device (e.g., a pocket PC phone connectable to a mobile phone) comprises a phone body 10. On the phone body 10 there are provided a control button 11, a screen 12, a speaker 13, and a hot key 14 in which both the speaker 13 and the hot key 14 are preferably provided. Each component is discussed in detailed below.

[0016] The control button 11 is a spherical member and is implemented as a touch sensitive rotary unit. The control button 11 comprises four direction keys and a central confirmation key (e.g., "OK" key). The control button 11 is sensitive to rotation by touching. In operating the electronic device, a user may use one hand to rotate the control button 11. A moving direction of the control button 11 (e.g., clockwise or counterclockwise rotation) can be determined by locating a start point and an end point of the movement. This is similar to making a dial on a typical telephone. As an end, the purpose of inputting a movement signal can be achieved by means of one hand dialing. The screen 12 is adapted to display messages. One exemplary example of the message is a virtual disk 121 (see FIG. 1). The speaker 13 is adapted to amplify sound to a desired volume. The sound can be a dialing sound generated by rotating the virtual disk 121. The hot key 14 is adapted to allow a user to select to enter a disk dialing mode or not.

[0017] After equipping the invention with the above hardware components, software is also installed in the electronic device for cooperating with hardware. In use, a user may press the hot key 14 to run the software to enter the disk dialing mode. A virtual disk 121 is then shown on the screen 12 of the electronic device (see FIG. 1). A plurality of fixed marks 123 are shown along a periphery of the virtual disk 121. The fixed marks 123 are comprised of numerals and characters. As shown, for example, there are "origin", "1", "2", "3", "4", "5", "#", "*", "6", "7", "8", "9", and "0" arranged clockwise. After user inputting a movement signal by manipulating the control button (the control button is a spring biased member) 11 and the movement signal is then received by the electronic device, a moving mark (e.g., red point) 122 on the periphery of the virtual disk 121 moves from the "origin" 124 on the periphery of the virtual disk 121 to a desired location along the fixed marks 123. A corresponding fixed mark 123 is activated after receiving a confirmation signal from user by manipulating the control button 11. And in turn, a corresponding numeral or character is generated. Further, the moving mark 122 returns to the "origin" 124 after traversing the periphery of the virtual disk 121. At the same time, for example, the speaker 13 makes a dialing sound similar to the conventional dialing sound of a telephone. By configuring as above, a user can achieve the purpose of dialing by means of the control button 11 and the virtual disk 121.

[0018] Referring to FIG. 2, it is a flowchart depicting a process for dialing after running the software of the elec-

tronic device and a user selecting to enter the disk dialing mode. The electronic device performs the following steps:

[0019] Step 201: A virtual disk 121 is shown on the screen 12. A plurality of fixed marks 123 are shown along a periphery of the virtual disk 121.

[0020] Step 202: After user inputting a movement signal by manipulating the control button 11 and the movement signal is then received by the electronic device, a moving mark 122 on the periphery of the virtual disk 121 moves from the "origin" 124 to a desired location along the fixed marks 123.

[0021] Step 203: The electronic device determines whether a confirmation signal is cancelled or not. If yes, the process ends successfully. Otherwise, the process goes to step 204.

[0022] Step 204: A corresponding numeral or character is generated after activating a corresponding fixed mark 123. Further, the moving mark 122 returns to the "origin" 124 after traversing the periphery of the virtual disk 121. At the same time, the speaker 13 makes a dialing sound similar to the conventional dialing sound of a telephone.

[0023] Step 205: Receive all moving signals. The process then ends successfully. By configuring as above, a user can achieve the purpose of dialing by means of the control button 11 and the virtual disk 121.

[0024] In addition, the invention can be applied to English and Chinese input for users preferring using a single hand in operation. Its principle is the same as the above digit input. That is, the invention simulates the input of an alphanumeric keypad of a conventional mobile phone by utilizing the touch sensitive rotary arrangement of the control button 11. As a result, input is achieved. For example, in addition to the "origin" 124 on the virtual disk 121 each of a plurality of fixed marks (including ten numerals and two special characters) shown on the periphery of the virtual disk 121 corresponds to a corresponding one of 12 keys of the conventional mobile phone. This means that it is identical to the conventional telephone dial. Therefore, the operation habit of users can be maintained with novel features being added.

[0025] Alternatively, the original alphanumeric keypad is replaced with alphabets and/or characters. For example, English letters, Chinese characters, and Mandarin phonetic symbols can be inputted by simulating data input by means of keypad.

[0026] While the invention herein disclosed has been described by means of specific embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.

What is claimed is:

1. An input method for a portable electronic device, which includes a control button and a screen, comprising the steps of:

showing a virtual disk on the screen, when the portable electronic device entering a disk dialing mode, wherein the virtual disk includes a plurality of fixed marks along its periphery, each of the fixed marks representing a numeral, a character, or a letter;

in response to receiving a movement signal inputted by the control button, moving a moving mark on the periphery of the virtual disk from the fixed mark labeled as an origin to a location desired by the user along the fixed marks; and