

clockwise direction. The controller 50 may also output a rotational clicking sound when the rotary casing 230 is returned to its original position to imitate the rotational clicking sound of antique rotary dial telephones. The user may also advantageously set the rotational speed of the rotary dial casing 230 using the appropriate menu options on the terminal.

[0043] Next, FIGS. 5A-5E are overviews illustrating different stages of a dialing operation being performed on the terminal according to another embodiment of the present invention. FIGS. 5A-5E are similar to FIGS. 4A-4D, except that the user touches the soft key "3" and rotates the soft key "3" all the way to the stopper 240, thus entering the command to perform a dialing operation of the number displayed in the inside area 250.

[0044] In more detail, as shown in FIG. 5A, the user first touches the soft key "3" and slides the key "3" clockwise towards the stopper 240. Note that similar to FIG. 4, the information related to the soft key "3" (which is previously stored in the memory 20) is displayed in the inside area 250. As shown in FIG. 5B, the user slides the soft key "3" to the stopper 240. Therefore, the controller 50 performs a dialing operation using the information displayed in the inside area 250. The controller 50 also displays an icon 500 to inform the user the dialing operation is being performed. As discussed above, the controller 50 may also output a clicking sound to inform the user he or she has slid the soft key to the stopper 240.

[0045] Alternatively, if the soft key "3" was not previously set as a speed dial key, the controller 50 would enter the number 3 as part of a number to be dialed. Further, as shown in the FIG. 5A, the further the soft key is away from the stopper 240, the more distance the user must slide the soft key.

[0046] FIG. 5C is similar to FIG. 5B, except that the controller 50 controls the vibrator 70 to vibrate when the user slides the soft key "3" to the position of the stopper 240 to inform the user that the soft key "3" has been successfully input. The controller 50 may also control the audio processor 60 to output a specific sound such as a ring tone. In addition, the intensity of the vibration or the type and volume of the ring tone may be advantageously set by the user using the appropriate menu options on the terminal.

[0047] FIG. 5D illustrates the user releasing the soft key "3" and the rotary casing 230 rotating counterclockwise back to its original position. FIG. 5E illustrates the rotary casing 230 being in its original position. As discussed previously with respect to FIG. 4, the rotary casing 230 preferably rotates back to its original position at a faster speed than the user rotates rotary casing 230 clockwise when dialing. The speed of the counterclockwise rotation of the rotary casing 230 may also be set by the user.

[0048] Further, the speed of the counterclockwise rotation may be faster for soft keys that are farther away from the stopper. For example, the counterclockwise speed of the rotary casing 230 may be faster when the user dials the soft key "8" than when the user dials the soft key "3". In addition, the arrangement of the soft keys shown in the figures is only an example, and the arrangement of the soft keys may be inverted from that shown in the figures. For example, FIG. 6 illustrates such an inverted arrangement of the soft keys. The different arrangements of the soft keys may also be selected by the user using the appropriate menu options on the terminal. In FIG. 6, the user would touch a particular soft key and rotate the rotary casing 230 in a counterclockwise direction to the stopper 240 to initiate a call to a phone number matched to the touched soft key.

[0049] As described above, the rotary dial casing 230 is rotated while the soft key is touched toward the stopper 240. However, rather than the whole casing including all the soft keys being rotated, it is also possible that only the touched soft key is displayed as being rotated when the user touches and slides the soft key. FIGS. 7A-7D illustrate this concept.

[0050] In more detail, FIG. 7A illustrates the user touching the soft key "3" and FIG. 7B illustrates the user rotating the soft key "3" clockwise towards the stopper 240. Note that only the soft key "3" is rotated and the other soft keys on the rotary dial casing are not rotated. FIGS. 7C and 7D illustrate the user releasing the soft key "3" and the soft key "3" being rotated counterclockwise back to its original position. Further, rather than displaying the soft key "3" being rotated in the counterclockwise direction in FIG. 7C, it is also possible to make the soft key "3" disappear from the screen when the user releases the soft key, and then reappear at its original position.

[0051] Next, FIGS. 8A-8D illustrate all soft keys being rotated together with the touched and rotated (slide) soft key "3". That is, FIG. 8A illustrates the user touching the soft key "3" and FIG. 8B illustrates the user sliding (rotating) the soft key "3" in the clockwise direction to the stopper 240. As shown in FIG. 8B, all of the other soft keys (e.g., the soft keys "4", "5", "6", etc.) are also rotated together with the soft key "3". FIG. 8C illustrates the user releasing the soft key "3" and FIG. 8D illustrates the soft key "3" being returned to its original position.

[0052] A description of entering more than one number on terminal will now be given. As described with reference to FIGS. 3-4D, when the user touches and slides one of the soft keys 210 and release the touched soft key 210 before reaching the stopper 240, the controller 50 receives the number input corresponding to the touched number key, but does not perform the dialing operation. Thus, the user may continue to select additional soft keys 210 to enter more than one number. FIGS. 9A-9E illustrate these features.

[0053] In more detail, in FIGS. 9A-9E, it is assumed the user wants to dial a number that has been previously associated with the speed dial number "15". Therefore, as shown in FIG. 9A, the user first touches the soft key "1" and the address information related to the speed dial key "1" is displayed in the inside area 250. Note that it is possible to configure the controller 50 to receive the number corresponding to the touched key when the user merely touches the key, or alternatively, only when the user touches and slides the soft key (without actually sliding the touched soft key to the position of the stopper 240).

[0054] Then, as shown in FIG. 9B, the user touches the soft key "5", and the address information corresponding to the speed dial key "15" is displayed in the inside area 250. Then, shown in FIG. 9C, the user rotates the soft key "5" to the position of the stopper 240, and the controller 50 performs the dialing operation for the speed dial key "15". The controller 50 also displays an icon 500 to inform the user that the dialing operation has been performed. FIGS. 9D and 9E illustrate the user releasing the soft key "15" and the soft key "15" being returned to its original position.

[0055] Further, the user can also enter a telephone number that is not stored in the memory 20 in a similar manner. For example, if the user wants to dial the phone number "202-888-1234", the user may sequentially input the numbers "2028881234" and slide the last number "4" to the stopper 240 to have the dialing operation performed. As the numbers are selected, the controller 50 displays each number in the inside area 250 so the user can see that the correct numbers have been successfully input. Alternatively, if the user does not touch any of the soft keys 210 for a predetermined amount