

further disclosure will primarily relate to a slide-type mobile terminal. However, such teachings apply equally to other types of terminals.

[0050] FIG. 2 is a perspective view of a front side of a mobile terminal 100 according to one embodiment. In FIG. 2, the mobile terminal 100 is shown having a first body 200 configured to slideably cooperate with a second body 205. The user input unit (described in FIG. 1) is implemented using function keys 210 and keypad 215. The function keys 210 are associated with the first body 200, and the keypad 215 is associated with the second body 205. The keypad includes various keys (e.g., numbers, characters, and symbols) to enable a user to place a call, prepare a text or multimedia message, and otherwise operate the mobile terminal 100.

[0051] The first body 200 slides relative to second body 205 between open and closed positions. In a closed position, the first body 200 is positioned over the second body 205 in such a manner that the keypad 215 is substantially or completely obscured by the first body 200. In the open position, the user has access to the keypad 215, as well as the display 151 and function keys 210. The function keys 210 are convenient to a user for entering commands such as start, stop and scroll.

[0052] The mobile terminal 100 is operable in either a standby mode (e.g., able to receive a call or message, receive and respond to network control signaling), or an active call mode. Typically, the mobile terminal 100 functions in a standby mode when in the closed position, and an active mode when in the open position. This mode configuration may be changed as required or desired.

[0053] The first body 200 is shown formed from a first case 220 and a second case 225, and the second body 205 is shown formed from a first case 230 and a second case 235. The first and second cases are usually formed from a suitably ridge material such as injection molded plastic, or formed using metallic material such as stainless steel (STS) and titanium (Ti).

[0054] If desired, one or more intermediate cases may be provided between the first and second cases of one or both of the first and second bodies 200, 205. The first and second bodies 200, 205 are typically sized to receive electronic components necessary to support operation of the mobile terminal 100. The first body 200 is shown having a camera 121 and audio output unit 152, which is configured as a speaker, positioned relative to the display 151. If desired, the camera 121 may be constructed in such a manner that it can be selectively positioned (e.g., rotated, swiveled, etc.) relative to first body 200.

[0055] The function keys 210 are positioned adjacent to a lower side of the display 151. The display 151 is shown implemented as an LCD or OLED. Recall that the display may also be configured as a touchscreen having an underlying touchpad which generates signals responsive to user contact (e.g., finger, stylus, etc.) with the touchscreen.

[0056] Second body 205 is shown having a microphone 122 positioned adjacent to keypad 215, and side keys 245, which are one type of a user input unit, positioned along the side of second body 205. Preferably, the side keys 245 may be configured as hot keys, such that the side keys are associated with a particular function of the mobile terminal 100. An interface unit 170 is shown positioned adjacent to the side keys 245, and a power supply 190 in a form of a battery is located on a lower portion of the second body 205.

[0057] FIG. 3 is a rear view of the mobile terminal 100 shown in FIG. 2. FIG. 3 shows the second body 205 having a

camera 121, and an associated flash 250 and mirror 255. The flash 250 operates in conjunction with the camera 121 of the second body 205. The mirror 255 is useful for assisting a user to position camera 121 in a self-portrait mode. The camera 121 of the second body 205 faces a direction which is opposite to a direction faced by camera 121 of the first body 200 (FIG. 2). Each of the cameras 121 of the first 200 and second 205 bodies may have the same or different capabilities.

[0058] In an embodiment, the camera 121 of the first body 200 operates with a relatively lower resolution than the camera 121 of the second body 205. Such an arrangement works well during a video conference, for example, in which reverse link bandwidth capabilities may be limited. The relatively higher resolution of the camera 121 of the second body 205 (FIG. 3) is useful for obtaining higher quality pictures for later use or for communicating to others.

[0059] The second body 205 also includes an audio output module 152 configured as a speaker, and which is located on an upper side of the second body 205. If desired, the audio output modules of the first and second bodies 200, 205, may cooperate to provide stereo output. Moreover, either or both of these audio output modules may be configured to operate as a speakerphone.

[0060] A broadcast signal receiving antenna 260 is shown located at an upper end of the second body 205. Antenna 260 functions in cooperation with the broadcast receiving module 111 (see FIG. 1). If desired, the antenna 260 may be fixed or configured to retract into the second body 205. The rear side of the first body 200 includes slide module 265, which slideably couples with a corresponding slide module located on the front side of the second body 205.

[0061] It is understood that the illustrated arrangement of the various components of the first and second bodies 200, 205, may be modified as required or desired. In general, some or all of the components of one body may alternatively be implemented on the other body. In addition, the location and relative positioning of such components are not critical to many embodiments, and as such, the components may be positioned at locations which differ from those shown by the representative figures.

[0062] Referring to FIG. 4 or FIG. 5, vehicle navigation system shown in can be detachably provided to a vehicle. Moreover, the mobile phone type terminal 100 shown in FIG. 2 or FIG. 3 can be detachably provided to a vehicle to fully play a role as a vehicle navigation system. Operational relations between the respective elements for implementing a screen size controlling function are explained with reference to FIG. 1 below.

[0063] In one embodiment, a the controller 180 determines an area of the display 151 that corresponds to a user's touching the screen. The controller 180 causes a zoom function to be applied to a portion of an image displayed on a touchscreen by way of zooming in or zooming out. For example, the image displayed on the touchscreen may contain a map image, on which a route based on position information and a position on the route are displayed, an image for displaying such information as a photo or a text, and the like. Accordingly, the touchscreen may display an entire image as a result of a zoom-out operation and a portion of the image as a result of a zoom-in operation.

[0064] In one embodiment, the alarm output module 153 is able to output vibration as a feedback of the zoom-in or zoom-out action. The mobile terminal 100 is able to generate information necessary for performing a specific function by