

programs being executed, and a list area, which provides a list of music file items stored in portable terminal 100. Each item displayed in the list area may be positioned according to a given order or a random order. The portable terminal 100 can play items displayed on the list area from the top to the bottom in order. The screen 71 for supporting the MP3 function can display an ellipsis on one side of the screen 71 indicating that additional items may be displayed.

If the user of the portable terminal 100 wants to perform a shuffle function to mix items currently displayed on the list area, the user can perform a touch motion as illustrated for certain items. For example, the user can shake the portable terminal 100 to execute the shuffle function. The sensor unit 130 can detect the direction, amplitude, and frequency of the shaking, and the sensor detection unit 140 can output sensor signals corresponding to the shaking of the portable terminal 100. The sensor detection unit 140 can differentiate a snapping motion signal having one amplitude and one cycle or a shaking motion having a number of amplitudes and frequencies by checking the amplitude and the frequency of the shaking.

If a touch event is generated while the MP3 function is executed, the portable terminal 100 can load the function table and can control a function of the MP3, for example, a shuffle function, depending on the shaking motion signal generated after the touch event. That is, the portable terminal 100 can change the order of "pop song 101," "pop song 109," "pop song 102," and "pop song 103" as in screen 71, to "pop song 101," "pop song 109," "pop song 107," and "pop song 103" as in screen 73. Item "pop song 101" may be an item touched by the user. A predetermined rule or a random shuffle function can be applied to the items, except the user-touched item.

As noted above, the portable terminal 100 can differentiate shaking motion signals having several amplitudes and frequencies and snapping motion signals having one amplitude and frequency, and can use different MP3 functions for each motion signal. That is, if a snapping motion signal is generated, the portable terminal 100 can support a shuffle function by mixing only the items displayed on the display unit 151 according to a predetermined rule. If a shaking motion signal is generated, the portable terminal 100 can perform a shuffle function for items displayed on the display unit 151 and all files existing in the same folder stored in the storage unit 170.

The portable terminal 100 may also remove items from the display unit 151 except the items on which a touch has been detected. That is, if the user touches a displayed item and shakes the portable terminal 100, untouched items can be removed from the display unit 151.

A portable terminal 100 can control application programs differently depending on the point touched by the user. For example, if the user shakes the portable terminal 100 after touching an edge of the display unit 151, the portable terminal 100 can shuffle or remove items displayed on the display unit around the edge touched by the user.

FIG. 8 is a flowchart illustrating a method of operating a portable terminal 100 according to exemplary embodiments of the present invention.

Referring to FIG. 8, an idle screen may be displayed after the portable terminal 100 is started and the controller 160 and other components of the portable terminal 100 are supplied power (201). The controller may check if at least one input signal including a key input event from a key pad, a touch event from a touch unit, a pressure event from a pressure sensor, and other events according to other inputs, has been generated (203). If input signals are not generated at step 203, the idle screen is maintained.

If at least one input signal is generated in step 203, the controller 160 can check if a motion signal has been generated (205). If an input signal is generated at step 203, the controller 160 can load the function table or the application program list stored in the storage unit 170.

A motion signal may include a tilting motion signal, a shaking motion signal, a snapping motion signal, and a grabbing motion signal that can be generated by tilting, shaking, or grabbing. If a motion signal is not generated at step 205, the controller 160 can control the generation of events according to the at least one input generated at step 203 (207). For example, if a key input signal is generated at step 203, the controller can display letters or numbers corresponding to the key signals on the idle screen or can control conversion of the screen displaying the letters or numbers. If a touch event is generated, the controller 160 can activate a key map mapped to the area where the touch event has been generated. Then if the user taps a certain point of a portable terminal 160, an input signal can be generated.

If a motion signal is generated at step 205, the controller 160 may generate events according to complex signals by referring to the function table and the application program list (209). For example, the controller 160 can generate a complex signal according to a touch event and a tilting motion signal, a complex signal according to a touch event and a shaking motion signal, and/or a complex signal according to a touch event and a snapping motion signal.

Thereafter, the controller 160 can execute the application program according to the complex signal (211). For example, if a touch event and a shaking motion signal are generated, the controller 160 can arrange content displayed on the display unit 151 according to a predetermined rule, and a shuffle function if an MP3 application program is being executed.

In the description hereinabove, a motion signal was generated after an input signal was generated. However, a motion signal may also be generated before the input signal. The portable terminal 100 can then execute application programs depending on the order of the input signal and motion signal. The portable terminal 100 can also execute application programs based on complex signals received while other application programs, such as a camera function, a message writing function, and an MP3 function are executed.

Furthermore, in the description hereinabove, the tilting, shaking, and grabbing motions may be done separately, but when a plurality of motions are generated, complex signals can be generated to control application programs. For example, if a touch event is generated and the user grabs the portable terminal 100 in a manner that satisfies preset conditions thereby generating a grabbing motion signal, and tilts or shakes the portable terminal 100, the portable terminal 100 can control an application program by recognizing the generated tilting or shaking motion signal along with other inputs, i.e., the touch event and grabbing motion signals. Accordingly, the process of generating complex signals may include combining various motion signals differently generated depending on the respective touch events.

It will be apparent to those skilled in the art that various modifications and variations can be made in the present invention without departing from the spirit or scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

What is claimed is:

1. An input method of a portable terminal, the method comprising:
generating a first input event;