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## INPUT DEVICE FOR PORTABLE TERMINAL AND METHOD THEREOF

### CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority from and the benefit of Korean Patent Application No. 10-2008-0119550, filed on Nov. 28, 2008, and Korean Patent Application No. 10-2009-0009712, filed on Feb. 6, 2009, which are hereby incorporated by reference for all purposes as if fully set forth herein.

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

Exemplary embodiments of the present invention relate to an input device and method for a portable terminal to simplify an input means for inputting commands for zoom-in and zoom-out of a portable terminal.

#### 2. Description of the Background

Portable terminals are widely used and can have various functions in addition to transmitting and receiving phone calls. For example, portable terminals may have a MP3 function corresponding to a file playing function, an image collection function corresponding to capturing and storing images, and functions related to executing mobile games or arcade games.

Existing portable terminals may use a touch screen method in which a user may input a signal through a key pad on a touch screen of the portable terminal. However, such a method of generating input signals typically requires a delicate touch or click. For instance, a user may zoom-in or zoom-out of the display screen by tapping or touching the touch screen or by using a finger widening action. If the zoom-in or zoom-out is done by tapping, the screen may move to the right or left direction (panning), which may not be what the user intended on accomplishing. If finger widening is used for zoom-in or zoom-out, the finger widening action may not be sufficiently wide and the action may be difficult to complete using one hand. As portable terminals get smaller, the problems described hereinabove become more serious.

### SUMMARY OF THE INVENTION

Exemplary embodiments of the present invention provide an input device and method for simplifying an input means for generating commands for zoom-in or zoom-out of a portable terminal screen.

Exemplary embodiments of the present invention disclose an input device of a portable terminal. The device includes an input unit, a sensor detection unit, a motion recognition unit, a function controller, and a storage unit. The input unit includes at least one of a touch unit, a pressure sensor, and a key pad. The touch unit sets a reference point corresponding to a touch detected on a touch screen. The pressure sensor detects a pressure applied to the portable terminal. The key pad generates a key input event according to a key input. The sensor detection unit detects a sensor signal generated by at least one of tilting, shaking and grabbing of the portable terminal. The motion recognition unit receives a motion signal generated in the portable terminal according to the sensor signal. The function controller executes a first application program according to a user function corresponding to at least one of the detected touch, the detected pressure, the key input event, and the motion signal. The storage unit stores the first application program.

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Exemplary embodiments of the present invention disclose an input method of a portable terminal. The method includes generating a first input event, and generating a second input event corresponding to a motion of the portable terminal, the second input event being generated simultaneously or consecutively with the first input event. The method includes executing a first application program according to a user function of the portable terminal, the first input event, and the second input event.

It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

### BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate exemplary embodiments of the invention, and together with the description serve to explain the principles of the invention.

FIG. 1 is a block diagram illustrating a configuration of a portable terminal according to exemplary embodiments of the present invention.

FIG. 2 is a block diagram illustrating a configuration of a controller according to exemplary embodiments of the present invention.

FIG. 3 illustrates a zoom-in or zoom-out screen according to exemplary embodiments of the present invention.

FIG. 4 is a flowchart illustrating an input method of a portable terminal according to exemplary embodiments of the present invention.

FIG. 5 illustrates an operation of a portable terminal according to a grabbing operation signal and touch event, according to exemplary embodiments of the present invention.

FIG. 6 illustrates an operation of a portable terminal according to a shaking operation signal and touch event, according to exemplary embodiments of the present invention.

FIG. 7 illustrates MP3 function operation according to exemplary embodiments of the present invention.

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

### DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

The invention is described more fully hereinafter with reference to the accompanying drawings, in which exemplary embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the exemplary embodiments set forth herein. Rather, these exemplary embodiments are provided so that this disclosure is thorough, and will fully convey the scope of the invention to those skilled in the art. In the drawings, the size and relative sizes of layers and regions may be exaggerated for clarity. Like reference numerals in the drawings denote like elements.

A portable terminal according to exemplary embodiments of the present invention may recognize a complex user operation and may support related functions. If an input event is generated by a first input mode and a second input event is generated by a movement of a portable terminal along with the input event, an application program can be controlled