

## SCROLLING METHOD OF MOBILE TERMINAL

### CROSS REFERENCE TO RELATED APPLICATIONS

**[0001]** The present application claims priority to Korean Application No. 10-2007-0089670 filed in Korea on Sep. 4, 2007 and Korean Application No. 10-2007-0089686 filed in Korea on Sep. 4, 2007, the entire contents of which is hereby incorporated by reference in its entirety.

### BACKGROUND OF THE INVENTION

**[0002]** 1. Field of the Invention

**[0003]** The present invention relates to a user interface of a mobile terminal having a touch pad.

**[0004]** 2. Description of the Related Art

**[0005]** A mobile terminal is a device that can be carried around and has one or more functions such as to perform voice and video call communication, inputting and outputting of information, storing data, and the like.

**[0006]** As such functions become more diversified, the mobile terminal can support more complicated functions such as capturing images or video, reproducing music or video files, playing games, receiving broadcast signals, and the like. By comprehensively and collectively implementing such functions, the mobile terminal may be embodied in the form of a multimedia player or device.

**[0007]** In order to implement various functions of such multimedia players or devices, the mobile terminal requires sufficient support in terms of hardware or software, for which numerous attempts are being made and implemented. For example, a user interface (UI) environment is provided to allow users to easily and conveniently search and select functions.

**[0008]** Also, as users consider their mobile terminal to be a personal portable device that may express their personality, mobile terminals are demanded to have various designs.

**[0009]** In terms of design, a folder type, slide type, bar type, or rotation type design may be applied for mobile terminals, and efforts have been made to provide a more convenient UI to users.

### SUMMARY OF THE INVENTION

**[0010]** Accordingly, one object of the present invention is to address the above-noted and other requirements.

**[0011]** Another object of the present invention is to provide a mobile terminal capable of providing to a user feedback upon reaching the end of a displayed menu list in a certain manner when the displayed menu list is scrolled according to a user manipulation, and a method for searching and providing feedback of a displayed menu.

**[0012]** To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, the present invention provides in one aspect a mobile terminal including: a sensing unit able to sense a flicking input manipulation by a user; an output unit; and a controller able to move a displayed menu list according to the flicking input manipulation sensed by the sensing unit, and to output a certain feedback via the output unit when the last item of the displayed menu list appears.

**[0013]** To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, the present invention provides

in another aspect a scrolling method of a mobile terminal including: sensing a flicking input manipulation by a user; moving a displayed menu list according to the sensed flicking input manipulation; and outputting a certain feedback indicating reaching of the end of a displayed menu list when the last item of the displayed menu list appears.

**[0014]** To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, the present invention provides in still another aspect a mobile terminal including: a manipulation unit; a display unit able to display a certain signal inputted via the manipulation unit; and a controller able to display a graphic effect on a certain region of a screen indicating the reaching of one end of a list displayed on the display unit when the displayed list is moved to the one end thereof.

**[0015]** To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, the present invention provides in yet another aspect a mobile terminal including: a display unit available for a touch input; and a controller able to display a graphic effect on a certain region of a screen indicating the reaching of one end of a displayed list when the displayed list is moved to the one end thereof according to the touch input.

**[0016]** To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, the present invention provides in another aspect a scrolling method of a mobile terminal including: sensing the inputting of a certain manipulation via an input unit; moving a displayed list to one end thereof according to the sensed manipulation input; and displaying a graphic effect on a certain region of a display screen when the list is moved to the one end thereof.

**[0017]** Further scope of applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0018]** The present invention will become more fully understood from the detailed description given hereinbelow and the accompanying drawings, which are given by illustration only, and thus are not limitative of the present invention, and wherein:

**[0019]** FIG. 1 is a schematic block diagram of a mobile terminal implementing an embodiment of the present invention;

**[0020]** FIG. 2 is a front perspective view of a mobile terminal implementing an embodiment of the present invention;

**[0021]** FIG. 3 is a rear perspective view of a mobile terminal implementing an embodiment of the present invention;

**[0022]** FIG. 4 is a block diagram of a wireless communication system with which the mobile terminal according to an embodiment of the present invention is operable;

**[0023]** FIG. 5 is a view of a screen displayed explaining a flicking manipulation touch input and resultant display of a menu performed on a touch screen of the mobile terminal in accordance with the present invention;