

MOBILE TERMINAL AND OPERATION METHOD THEREOF

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of Korean Application No. 2008-0088903, filed Sep. 9, 2008 in the Korean Intellectual Property Office, the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a mobile terminal and an operating method of the mobile terminal, and more particularly, to a mobile terminal including a transparent, flexible display and an operating method of the mobile terminal, in which a screen effect applied to a display region on the flexible display can be effectively controlled according to whether the flexible display is folded or bent.

[0004] 2. Description of the Related Art

[0005] A mobile terminal is a portable device equipped with one or more of functions for performing voice and video communications, inputting and outputting information, storing data and so on while being carried with.

[0006] In order to implement the complicated functions, a variety of attempts have been made to the mobile terminal, implemented in the form of a multimedia player, in terms of hardware or software. Mobile terminals equipped with a flexible display or a transparent display have also been developed.

[0007] A flexible display, unlike a typical flat panel display, can be folded, bent or rolled like a scroll. A transparent display may be fabricated using a transparent substrate and a plurality of transparent elements. When an object is displayed in a display region on a surface of a transparent display, an object obtained by reversing the object displayed in the display region left to right may be displayed in another display region on the other surface of the transparent display. A transparent display may be able to display both transparent images and opaque images.

[0008] Therefore, in order to realize a transparent, flexible display, it is necessary to develop ways to effectively utilize two display regions on the opposite surfaces of a flexible display in consideration of whether the flexible display is folded or bent.

SUMMARY OF THE INVENTION

[0009] The present invention provides a mobile terminal including a transparent, flexible display and an operating method of the mobile terminal, in which a screen effect applied to a display region on the flexible display can be effectively controlled according to whether the flexible display is folded or bent.

[0010] According to an aspect of the present invention, there is provided an operating method of a mobile terminal, the operating method including providing a transparent flexible display having a first display region at the front of the transparent flexible display and a second display region at the rear of the transparent flexible display; displaying an image in the first display region; and if an image reverse menu is chosen, dividing the first display region into first and second

regions, displaying the image in the first region, and displaying a reversed image obtained by the image left to right in the second display region.

[0011] According to another aspect of the present invention, there is provided an operating method of a mobile terminal, the operating method including providing a transparent flexible display having a first display region at the front of the transparent flexible display and a second display region at the rear of the transparent flexible display; displaying a moving image play screen in the first display region; determining whether a bend signal indicating that the transparent flexible display is bent is detected; and if the results of the determining indicate that a portion of the second display region has the same display direction as that of the first display region, displaying subtitles corresponding to the moving image play screen in the portion of the second display region having the same display direction as that of the first display region.

[0012] According to another aspect of the present invention, there is provided an operating method of a mobile terminal, the operating method including providing a transparent flexible display having a first display region at the front of the transparent flexible display and a second display region at the rear of the transparent flexible display; displaying an image in the first display region; determining whether a bend signal indicating that the transparent flexible display is bent is detected; and if the results of the determining indicate that a portion of the second display region has the same display direction as that of the first display region, displaying information regarding the image in the portion of the second display region having the same display direction as that of the first display region.

[0013] According to another aspect of the present invention, there is provided an operating method of a mobile terminal, the operating method including providing a transparent flexible display having a first display region at the front of the transparent flexible display and a second display region at the rear of the transparent flexible display; displaying a string of input words received in response to a user command in the first display region; determining whether a bend signal indicating that the transparent flexible display is bent is detected; if there is a typo in the input word string and the results of the determining indicate that a portion of the second display region has the same display direction as that of the first display region, displaying a recommended word for an input word including the typo in the portion of the second display region having the same display direction as that of the first display region; and if the bend signal is detected for more than a predefined amount of time, replacing the input word including the typo with the recommended word.

[0014] According to another aspect of the present invention, there is provided an operating method of a mobile terminal, the operating method including providing a transparent flexible display having a first display region at the front of the transparent flexible display and a second display region at the rear of the transparent flexible display; displaying a plurality of images in the first display region; determining whether a bend signal indicating that the transparent flexible display is bent is detected; if one of the images is chosen and the results of the determining indicate that a portion of the second display region has the same display direction as that of the first display region, displaying information regarding the chosen image in the portion of the second display region having the same display direction as that of the first display region; and if the bend signal is detected for more than a