

[0009] FIG. 2 illustrates the example system of FIG. 1, the system shown oriented for the low-resolution input mode.

[0010] FIG. 3 illustrates another example system for transitioning between a high-resolution input mode and a low-resolution input mode according to embodiments of the invention, the system shown oriented for the high-resolution input mode.

[0011] FIG. 4 illustrates the example system of FIG. 3, the system shown oriented for the low-resolution input mode.

[0012] FIG. 5 illustrates yet another example system for transitioning between a high-resolution input mode and a low-resolution input mode according to embodiments of the invention.

[0013] FIGS. 6-8 illustrate an example method for transitioning between a high-resolution input mode and a low-resolution input mode according to embodiments of the invention.

[0014] FIGS. 9A-9B illustrate an example method of unobscuring items that have been obscured according to embodiments of the invention.

[0015] FIG. 10 illustrates an example computing system that can include one or more of the embodiments of the invention.

[0016] FIG. 11 illustrates an example personal computer that can include one or more embodiments of the invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] In the following description of preferred embodiments, reference is made to the accompanying drawings which form a part hereof, and in which it is shown by way of illustration specific embodiments in which the invention can be practiced. It is to be understood that other embodiments can be used and structural changes can be made without departing from the scope of the embodiments of this invention.

[0018] This relates to transitioning between modes of input, and in particular, transitioning between touch-based input and mouse/keyboard-based input, by sensing a change in the orientation of a display screen. For example, when a display screen is oriented upright and relatively far from a user in a configuration typical of mouse and keyboard input, a mouse/keyboard-based input mode can be selected and a corresponding UI can be displayed on the screen. In this input mode, the mouse and keyboard are typically oriented closer to the user and relatively flat (i.e., substantially parallel to the ground or a work surface such as a desktop). To switch to a touch-based input, a user may wish to change the orientation of the display screen to make touching the screen easier or more natural. For example, to enter touch input the user might want to pull the screen closer and push the display screen down flat, as if the screen is a book the user is reading. Therefore, when the display screen is oriented closer to the user and relatively low and flat (i.e., substantially parallel to the ground or work surface such as a desktop), a touch-based input mode can be selected and a corresponding UI can be displayed. In this way, for example, transitions from one input mode to another may be made with minimal or no user input and may appear more seamless to the user.

[0019] Because of differences between modes of input, it can be difficult to transition from one input mode to another efficiently. In general, input interfaces may be roughly classified into two categories, high-resolution input methods and low-resolution input methods. Note that high/low-resolution

input should not be confused with high/low resolution display. The latter refers to the level of fineness (resolution) at which an image can be displayed; the former refers to the general level of fineness (resolution) at which user input can be detected and processed. One measure of input resolution may be based on, for example, the size of selectable icons, buttons, sliders, and other input items and/or the distance between input items that an input method requires for reliable detection of an input. For example, a high-resolution input method may be able to discern whether a user is selecting one or the other of two very small icons that are displayed close to each other, while a low-resolution input method may not be able to determine which of the two icons the user is trying to select. In this regard, input methods based on a computer mouse typically are relatively high-resolution input methods. In particular, a mouse input method can allow selection of very small input items that are very close together, in some cases allowing selection of a single-pixel-sized input item on a display screen. Because small input items can be selected and/or manipulated, input items displayed in a UI for a mouse-based input mode can include small control objects, such as small buttons. Of course, a UI for a high-resolution input method need not utilize small and/or closely-spaced input items, but may use larger and/or further-apart input items. By comparison, input methods based on touching a display screen with a finger or thumb, for example, are relatively low-resolution input methods because they typically require the use of input items that are larger and/or further apart. As described in more detail below, it can be beneficial to take into account some of the differences between low-resolution input and high-resolution input in making transitions between the two modes of input.

[0020] An example system for transitioning between a high-resolution input mode and a low-resolution input mode according to embodiments of the invention will now be described with reference to FIGS. 1 and 2. FIGS. 1 and 2 show a computer system 100 including a housing 101, display screen 103, an adjustable stand 105, and a keyboard 107. Adjustable stand 105 includes a lower base 109, an arm 111, an attachment post 113, a base hinge 115, and a post hinge 117. Included within housing 101 are an accelerometer 119 coupled with a processor 121. Processor 121 may be, for example, be a central processing unit (CPU) of computer system 100, a dedicated processor for controlling the transition between modes of input, etc. As shown in the figures, processor 121 is located in housing 101. However, processor 121 may be located elsewhere, for example, in an external housing, and the processor may be coupled with accelerometer 119 via any of a number of types of communication channels including wired and wireless.

[0021] FIG. 1 shows the computer system 100 oriented for a keyboard/mouse input mode. That is, in this particular example embodiment, when display 103 is oriented relatively upright, high, and further away from the user, a keyboard/mouse input mode is selected.

[0022] FIG. 2 shows computer system 100 oriented for a touch-based input mode. FIG. 2 shows display 103 oriented relatively flat, low, and closer to the user, in comparison to FIG. 1. In this particular example embodiment shown in FIG. 2, housing 101 has been pulled toward the user and pushed down flat, such that display 103 is now oriented for a touch input mode.

[0023] The change in the orientation of display 103 can be detected by accelerometer 119. Specifically, accelerometer