

[0089] FIG. 8B is a front facing illustrated perspective view of portable computer system 100, in one embodiment of the present invention. In this embodiment, front cover 300 is configured with the left side portion of flexible display panel 500 disposed upon the inside surface of the front cover, and as such, is not visible. Additionally, the main body portion of portable computer system 100 is configured with the right side portion of flexible display panel 500. Front cover 300 is adapted to be rotated about the axis or hinge as indicated by the arrow.

[0090] FIG. 8C shows the portable computer system 100 of FIG. 8B with the front cover 300 in an opened position. In this embodiment, left side portion 500L and right side portion 500R of flexible display panel 500 is not segmented, such that when front cover 300 is in the open position, a contiguous panel display is presented to the user. Shown as being displayed to the user are two calendars, e.g., the months of December 2000 and January 2001 which are analogous to the calendars of FIG. 8A.

[0091] FIG. 8D is a bottom side profile perspective view of portable computer system 100 configured with a foldable flexible display panel. It should be appreciated that when the foldable display panel is fully extended in the open position, three display panel functionality is achieved. Flexible display portion 500, on the left, is adapted to be rotated about the axis as indicated by the arrows. Flexible display portion 501, on the right, is adapted to rotate about the axis as indicated by the arrows.

[0092] It should be further appreciated that while in one embodiment of the present invention, the front cover is shown as configured with a flexible touch panel sensor disposed beneath the flexible touch screen, as described in FIG. 8A, in another embodiment there may be a flexible display panel disposed within the front cover without an accompanying touch sensor. By virtue of the physical properties of the flexible display panel, a flexible touch panel may be disposed within the main body of the portable computer system, such that when stylus contact, or other appropriate contact is made with the flexible display panel disposed within the front cover, the point of contact is transferred to the flexible touch sensor disposed within the main body portion of the portable computer system.

[0093] FIG. 9 is a block diagram of the circuitry of the palmtop computer 100 in FIGS. 6A and 6B, in one embodiment of the present invention. The circuitry depicted is analogous to the described circuitry of FIG. 3D, with the following additions. Display control circuit 200 is added for activating the display panel, as previously described, and is shown as coupled to bus 110. Display device 105, shown as coupled to bus 110 in this embodiment of the present invention, is representative of flexible display panel 500 mounted to portable computer system 100 in FIG. 6A. In one embodiment of the present invention, on-screen cursor control 107, shown as coupled to bus 110, is flexible touch sensor 501, analogous to flexible touch sensor 501 of FIG. 6A.

[0094] FIG. 10 is a block diagram of the circuitry of the palmtop computer 100 in FIGS. 7 and 8A, 8B, and 8C in one embodiment of the present invention. The circuitry depicted is analogous to the described circuitry of FIG. 3D, with the following additions. Display control circuit 200 is added for activating the appropriate display panel, as previously described, is shown as coupled to bus 110. Display device

105-A, with coupled front display panel A-1 and rear display panel A-2, shown as coupled to bus 110 in this embodiment of the present invention, is representative, respectively, of flexible display panel 500A and flexible display panel 500B disposed integral with front cover 300. Display device 105-B, shown as coupled to bus 110, is representative of the flexible display panel 600, coupled to palmtop computer 100, in one embodiment of the present invention. On-screen cursor control 107, shown as coupled to bus 110, in one embodiment of the present invention, is flexible touch sensor 501, analogous to flexible touch sensors 501A, 501B, and 600 of FIGS. 7 and 8A.

[0095] With reference to FIG. 11, a flow chart depicting the steps of a process 1100 utilizing the user interface for portable computer system 100, in accordance with one embodiment of the present invention.

[0096] In step 1102, a user turns on (powers up) portable computer 100 equipped with flexible display panel 500 and flexible touch sensor 501, in one embodiment of the present invention.

[0097] In step 1103, flexible display panel 500 displays images and characters to a user. In one example, the images and characters displayed via the flexible display panel take the form of a monthly calendar, e.g., the month of December 2000. This current example of one embodiment of the present invention is depicted in FIG. 6A.

[0098] In step 1104, the flexible display panel receives input from the user. In this example, the user touched the flexible display panel in the area that equates to Wednesday, December 20th. The flexible touch sensor is operable to register a position where contact is made with a surface of the flexible display panel. Therefore, in this example, the touching of the 20th of December, as the input, is then translated.

[0099] In step 1105, the flexible touch sensor translates the input, in this instance the contact with a surface of the flexible display panel equating to the 20th of December, into a particular command that controls the portable computer system. In this example of one embodiment of the present invention, the command instructs the portable computer system to display a new set of images and characters via the flexible display panel. In this example, the images and characters take the form of the daily planner for Wednesday, December 20th as is shown in FIG. 6B.

[0100] Therefore, by implementing the present invention as described and depicted, the disadvantages as previously discussed are overcome. By incorporating a flexible display panel with a flexible touch sensor, the overall height requirement of a portable electronic device is reduced. Further, by disposing the flexible display panel above the flexible touch sensor, the parallax effect is all but eliminated, while the quality of the display is not diminished.

[0101] The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited