technology. Electronic fabrics are comprising of conductive fibers that are adapted to conduct electrical impulses that are in response to a contact with the fabric. Electronic fabrics can be designed to provide various levels of responsiveness and output. In one example, the conductive fibers enable the sensor to detect a particular point of contact. In another example, the conductive fibers may enable the sensor to detect not only the particular point of contact, but also the amount of pressure applied at that point of contact. In another embodiment, the technology employed in the fabrication of the flexible touch sensor may be analog resistive touch technology.

[0072] Referring still to FIG. **4**, in the present embodiment, disposed beneath flexible touch sensor **501** is optional support shelf **502**. Support shelf **502** can be used to protect flexible display panel **500** and flexible touch sensor **501** against puncture. For example, writing on a piece of paper where there is no backing/support such as, e.g., the surface of a desk or a piece of cardboard, it is very easy to puncture the sheet of paper. If, however, a backing/support is utilized, the chance of puncturing the sheet of paper is basically eliminated. This is the function of optional support shelf **502**, which provides backing to flexible display panel **500** and flexible touch sensor **501**. In one embodiment, mid frame **235** may be utilized as support shelf **502**. In another embodiment, PCB **225** may be utilized as support shelf **502**. It should be appreciated that, as shown in FIG. **4**, the overall height of the cross-section, including the flexible display panel, the flexible touch sensor, and the support shelf, is approximately 1 millimeter, or about one quarter the thickness of the prior art.

[0073] FIG. **5**A is a cross-section illustrated perspective of palmtop computer **100** as shown in FIGS. **7** and **8**A, in another embodiment of the present invention. Flexible display panel **500**A is analogous to flexible display panel **500**A of FIG. **7**. In this embodiment, flexible display panel **500**A is disposed on top of flexible touch sensor **501**A. Flexible touch sensor **501**A is adapted to respond to flexible display panel **500**A being contacted by a stylus, or appropriate touching implement, utilized by a user. Beneath flexible touch sensor **501**A is optional support shelf **502**. Beneath support shelf **502** is flexible touch sensor **501**B. Flexible display panel **500**B, analogous to flexible display panel **500**B of FIG. **8**A, is disposed below fabric touch sensor **501**B. Flexible touch sensor **501**B is adapted to respond to flexible display panel **500**B being contacted by a stylus utilized by a user. It should appreciated that, while in the context of the disclosure, the fabric touch sensor is depicted and described as disposed beneath the flexible display panel, in other embodiments of the present invention the fabric touch sensor may be disposed above the flexible display panel.

[0074] It should be appreciated that, in this embodiment of the present invention, many thin materials may be used in the construction of optional support shelf **502**. It should further be appreciated that in the described embodiments of the present invention, the optional support shelf is shown as being present. However, in another embodiment, optional support shelf **502** may not be present. In one embodiment, support shelf **502** is constructed out of thin molded plastic. In another embodiment, support shelf **502** may be constructed out of aluminum, or other applicable metallic material. In yet another embodiment, support shelf **502** may be constructed out of a resin material. In fact, numerous materials can be used in the construction of support shelf **502**. The above list of materials should not be considered exhaustive, but is used to illustrate the variety of materials available which may be used in conjunction with the present invention.

[0075] It should be further appreciated that the overall height of the cross-section illustration in FIG. **5**A is less than two millimeters. As such, multiple flexible touch sensors, one on top of another, may be implemented in the present invention. Accordingly, in another embodiment of the present invention, the flexible touch sensor could be adapted to be reactive to the pressure of the contact. For example, a light pressured contact may activate one function or operation, a medium pressured contact might activate a second function or operation, and a heavy pressured contact may activate a third function or operation.

[0076] FIG. **5**B illustrates a cross-section perspective view of flexible display panel **500** shown as having flexible touch sensor **501** interwoven within flexible display panel **500**, in one embodiment of the present invention. Flexible touch sensor **501**, as indicated with a dotted line, is shown as disposed within flexible display panel **500**. Support shelf **502** is disposed beneath flexible panel **500**.

[0077] In the preferred embodiment, electronic paper technology is employed in the formation of the two sided display component and the flexible flat display panel discussed herein. The components, functions, and processes that comprise electronic paper are referenced in the U.S. Pat. No. 7,289,083 assigned to the assignee of the present invention, entitled "MULTI-SIDED DISPLAY FOR PORTABLE COMPUTER", by FRANCIS CANOVA JR., filed Nov. 30, 2000.

Utilization of the Present Invention

[0078] With reference to FIG. **6**A, portable computer system **100** is shown in a front facing illustrated perspective. In this embodiment of the present invention, flexible display panel **500** is coupled to the portable computer and disposed upon the body of the portable computer. When a user powers up portable computer **100** by pressing on/off button **95**, shown as being disposed on the top surface area of portable computer **100** and oriented toward the right side, display control circuit **200**, (FIG. **9**) activates flexible flat display panel **500**, such that information or data becomes viewable. Additionally activated is flexible touch sensor **501**, disposed beneath flexible flat display panel **500**, as shown in FIG. **4**. In one example, the data viewed is a monthly calendar, e.g., the month of December 2000, as shown in FIG. **6**A. It should be appreciated that the data viewed, in another example, could be a GUI (graphical user interface) or other information presented in a fashion associated with a single panel display.

[0079] In the present embodiment of the present invention, when a user contacts flexible flat display panel **500** with stylus **80**, or other appropriate device, that point of contact is transmitted to flexible touch sensor **501**, disposed beneath flexible flat display panel **500** as shown in FIG. **4**, for identification. The identified point of contact, transmitted from flexible flat display panel **500** to flexible touch sensor **501**, is then relayed to processor **101** of portable computer system **100** (FIG. **3**D), such that subsequent additional processes or functions are initiated.

[0080] Referring still to FIG. **6**A and using the displayed month of December as one example, in one embodiment of the present invention, a user might touch flexible display panel **500** in the region associated with Wednesday, the 20th