causing movement of the touch screen display **24** relative to the base **22** of the portable electronic device **20**. Referring first to FIG. **6**, there is shown a sectional side view of portions of the portable electronic device **20**, according to one embodiment. In the present example, a user touches the touch-sensitive input surface **28** at the area **91** (FIG. **5**) of the touch screen display **24**, by pressing in the direction of the arrow "A" (step **110**). The X and Y co-ordinates of the location of the touch on the touch-sensitive input surface **28** are determined at the controller **30** and the co-ordinates of the touch are provided to the processor **40** (step **112**). The processor **40** uses the co-ordinates of the touch to determine the associated option or command selected by the user based on the location of the touch (step **114**) and carries out the appropriate action or actions accordingly (step **116**). The co-ordinates of the touch are also used by the processor **40** to determine the associated wire **32***b* (the wire **32** to activate) (step **118**) and then complete the circuit including the wire **32***b* to cause current flow resulting in a change in shape from the extended spring-shaped room temperature state to the compressed spring-shaped heated state (step **120**). The touch screen display **24** moves as a result of the change in length of the coil-spring shaped wire **32***b*, as shown in FIG. **6**. It will be appreciated that the Figures are not to scale and the movement of the touch screen display **24** is exaggerated for the purpose of illustration. As shown, the touch screen display **24** pivots in the present example to provide the user with a tactile response.

[0054] Referring now to FIG. **7**, there is shown a sectional side view of portions of the portable electronic device **20**, similar to FIG. **6**. In the present example, however, a user touches the touch-sensitive input surface **28** at the area **93** (FIG. **5**) of the touch screen display **24**, by pressing in the direction of arrow "B" (step **110**). The X and Y co-ordinates of the location of the touch on the touch-sensitive input surface **28** are determined at the controller **30** and the co-ordinates of the touch are provided to the processor **40** (step **112**). The processor **40** uses the co-ordinates of the touch to determine the associated option or command selected by the user (step **114**) and carry out the appropriate action or actions based on the option or command determined at step **114** (step **116**). The co-ordinates of the touch are also used by the processor **40** to determine the associated wire **32***d* (step **118**) to activate and then complete the circuit including the wire **32***d* to cause current flow resulting in a change in shape from the extended spring-shaped room temperature state to the compressed spring-shaped heated state (step **120**). The touch screen display **24** moves as a result of the change in length of the coil-spring shaped wire **32***d*, as shown in FIG. **7**. Again, it will be appreciated that the Figures are not to scale and the movement of the touch screen display **24** is exaggerated for the purpose of illustration. Again, the touch screen display **24** pivots in the present example to provide the user with a tactile response.

[0055] Referring now to FIG. **8**, there is shown a sectional side view of portions of the portable electronic device **20**, similar to FIGS. **5** and **6**. In the present example, a user touches the touch-sensitive input surface **28** at the area **94** (FIG. **5**) of the touch screen display **24**, by pressing in the direction of arrow "C" (step **110**). The X and Y co-ordinates of the location of the touch on the touch-sensitive input surface **28** are determined at the controller **40** and the co-ordinates of the touch are again provided to the processor **40** (step **112**) for determining the associated option or command selected by the user (step **114**) and performing the appropriate actions based on the option or command determined at step **114** (step **116**). The co-ordinates of the touch are used by the processor **40** to determine the associated coil spring wires **32***a*, **32***b*, **32***c*, **32***d* (step **118**) and then complete each of the circuits including the respective coil spring shaped wires **32***a*, **32***b*, **32***c*, **32***d* to cause current flow through each wire **32***a*, **32***b*, **32***c*, **32***d* resulting in a change in shape from the extended spring-shaped room temperature state to the compressed spring-shaped heated state (step **120**). The touch screen display **24** moves as a result of the change in length of all of the coil-spring shaped wires **32***a*, **32***b*, **32***c*, **32***d*, as shown in FIG. **8**. Again, it will be appreciated that the Figures are not to scale and the movement of the touch screen display **24** is exaggerated for the purpose of illustration. In the present example, each of the four wires **32***a*, **32***b*, **32***c*, **32***d* shrinks and, rather than pivoting, the touch screen display **24** moves generally parallel to the base **22**.

[0056] With the movement of the touch screen display **24** relative to the base **22** caused by the phase change in the wire or wires **32***a*, **32***b*, **32***c*, **32***d*, the user is provided with a tactile response during user interaction with the graphical user interface.

[0057] As indicated above, the touch screen display **24** can be any suitable touch screen display and is not limited to a capacitive touch screen display. The touch screen display can be, for example, a resistive touch screen display or any other suitable touch screen display, as will be appreciated by those skilled in the art.

[0058] As described, the touch screen display **24** is not limited to the determination of a single location of a static touch event. Instead, motions such as the sliding of a finger along the touch screen display **24** can be determined. Further, it is contemplated that touches at more than one location on the touch screen display **24** can be determined and motions such as increasing or decreasing the distance between finger touch locations can be determined. With more than one location of touch, more than one set of X and Y co-ordinates can be used to determine which of the coil-shaped wires **32***a*, **32***b*, **32***c*, **32***d* to activate. Thus, more than one of the wires **32***a*, **32***b*, **32***c*, **32***d* can be activated without activating all four of the wires **32***a*, **32***b*, **32***c*, **32***d*. For example, two of the wires **32***a*, **32***b*, **32***c*, **32***d* that are located proximal corners that share a common side can be activated to cause the touch screen display **24** to pivot. Further still, the changing location or motion of the touch can result in a change in activation from one or all of the coil shaped wires **32***a*, **32***b*, **32***c*, **32***d* to another or all of the coil-shaped wires **32***a*, **32***b*, **32***c*, **32***d*.

[0059] Although five areas are shown in the touch screen display **24** in the embodiment shown in FIG. **5**, it will be appreciated that these areas are shown for exemplary purposes only and other areas can be employed. For example, the X and Y co-ordinates can be determined, followed by activation of the nearest one or ones of the four wires **32***a*, **32***b*, **32***c*, **32***d*. Further, the shape of the areas can differ from that shown. Further, a different number of wires can be used and the wires can be located at different positions between the base **22** and the touch screen display **24**.

[0060] In the embodiments described above, the touch screen display **24** is framed by the frame **84**, which is fixed to the base **22** by the sidewalls **86**. It is contemplated that base **22** can be fixed to the touch screen display **24** by flexible sidewalls rather than, for example, rigid sidewalls. Such flexible sidewalls can be made of any suitable elastomer.