accordance with the method and system of the present invention. As depicted, the process starts at block **120** and thereafter proceeds to block **122**. Block **122** illustrates a determination as to whether user input signals are received. If user input signals are not received, the process passes to block **126**. If user input signals are received, the process passes to block **124**. Block **124** depicts adjusting the graphical display according to the user input signal. For example, the a two-dimensional graphical representation of the three-dimensional graphical image produced on the topographical modeling system may be adjusted to reflect visual feedback. Thereafter, block **126** depicts outputting a graphical display signal and the process ends.

With reference now to FIG. **9**, there is depicted a high level logic flowchart of a process for determining force feedback and visual feedback in accordance with the method and system of the present invention. As illustrated, the process starts at block **130** and thereafter proceeds to block **132**. Block **132** depicts determining the magnitude and direction of externally applied force. Next, block **134** illustrates detecting the temperature of an external force element. Thereafter, block **136** depicts a determination as to whether a particular resistance is applied to model tactile physical characteristics of the graphical image. If a particular resistance is not applied, the process passes to block **140**. If a particular resistance is applied, the process passes to block **138**. Block **138** illustrates adjusting the internal resistance applied to each supportive mechanism that is effected in response to the magnitude and direction of the externally applied force.

Next, block **140** depicts a determination as to whether a particular temperature is applied to model tactile physical characteristics. If a particular temperature is not applied, the process passes to block **144**. If a particular temperature is applied, the process passes to block **142**. Block **142** illustrates adjusting the internal temperature applied to each supportive mechanism that is effected in response to the detected temperature from the externally applied force element. Next, block **144** depicts a determination as to whether a particular visual surface is applied to model visual physical characteristics. If a particular visual surface is not applied, the process ends. If a particular visual surface is applied, the process passes to block **146**. Block **146** illustrates adjusting the visual surface applied to the visual display in response to the externally applied force and temperature. In this manner, objects that change surface color and shape in response to force and temperature will do so when modeled graphically. Thereafter, the process ends.

It is important to note that, although the present invention has been described in the context of a fully functional computer system, those skilled in the art will appreciate that the mechanisms of the present invention are capable of being distributed as a program product in a variety of forms, and that the present invention applies equally regardless of the particular type of signal-bearing media utilized to actually carry out the distribution. Examples of signal bearing media include, but are not limited to, recordable-type media such as floppy disks or CD ROMs and transmission-type media such as analogue or digital communications links.

While the invention has been particularly shown and described with reference to a preferred embodiment, it will be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. A three-dimensional topographical modeling system, said system comprising:

a control surface that is adjustable to provide a tactile-detectable graphical representation of a three-dimensional graphical image and associated physical characteristics;

a sensitivity element that detects external force applied to said control surface; and

a controller that adjusts said tactile-detectable graphical representation to model said associated physical characteristics of said graphical image when said external force is applied to said control surface, wherein

said control surface further comprises:

a flexible material;

a plurality of mechanisms dispersed about said flexible material; and

a plurality of actuators controlled by said controller for controlling the internal force applied to said flexible material by each of said plurality of mechanisms.

2. The three-dimensional topographical modeling system according to claim **1**, wherein said plurality of actuators control the resistance of each of said plurality of mechanisms.

3. The three-dimensional topographical modeling system according to claim **1**, wherein said plurality of actuators control the temperature of each of said plurality of mechanisms.

4. The three-dimensional topographical modeling system according to claim **1**, wherein said plurality of actuators control the vibration of each of said plurality of mechanisms.

5. The three-dimensional topographical modeling system according to claim **1**, wherein said plurality of actuators detect external force applied to said plurality of mechanisms.

6. The three-dimensional topographical modeling system according to claim **1**, wherein said flexible material is vacuum-sealed about said plurality of mechanisms.

7. The three-dimensional topographical modeling system according to claim **1**, wherein said sensitivity element further comprises a capacitive layer embedded with said control surface.

8. The three-dimensional topographical modeling system according to claim **1**, wherein said system further comprises a display surface embedded within said control surface that provides a visual graphical representation of graphical output from a data processing system.

9. The three-dimensional topographical modeling system according to claim **1**, wherein said controller maps control signals that determine said tactile-detectable graphical representation and a visual graphical representation from said graphical output.

10. The three-dimensional topographical modeling system according to claim **9**, wherein said controller determines said control signals for said tactile detectable graphical representation from an expected reaction of said physical characteristics to said external force.

11. A three-dimensional topographical modeling system, said system comprising:

a control surface that is adjustable to provide a tactile-detectable graphical representation of a three-dimensional graphical image and associated physical characteristics;

a sensitivity element that detects external force applied to said control surface, wherein said sensitivity element detects temperature applied to said control surface; and

a controller that adjusts said tactile-detectable graphical representation to model said associated physical characteristics of said graphical image when said external force is applied to said control surface.