

light pressure, e.g., that from a pointing or dragging operation. However, when a user presses a key center, the cover would give under their finger somewhat as the foam/gel/air material **405** is compressed, while a user pressing over a key edge would feel the hard ridge underneath. While this arrangement is electrically and mechanically simple (with no active mechanical parts), the surface cover and key filler materials must be chosen carefully to provide noticeable compression at key center yet be durable to wear. Additionally, the sandwich of surface cover and foam could become too thick for the capacitive sensors to properly detect through. To overcome these deficiencies, the surface cover **303** itself could contain flex circuitry (well known to those skilled in the art) imprinted with a suitable electrode pattern, which would dispense with the necessity of the electrode layer **402**.

[**0038**] Many variations and/or combinations of the embodiments discussed herein will be apparent to those skilled in the art. For example, as noted above, the articulating frame may be combined with the Braille-like dots to form articulating Braille-like dots. Alternatively, the fixed Braille-like dots may be combined with the articulating ridges described with reference to FIG. **8** or with the compressible material of FIG. **9**. It should also be noted that there are many alternative ways of implementing the methods and apparatuses of the present invention. It is therefore intended that the following appended claims be interpreted as including all such alterations, permutations, combinations and equivalents as fall within the true spirit and scope of the invention.

What is claimed is:

1. A keyboard having a tactile feedback arrangement, the tactile feedback arrangement comprising:

a first tactile feedback mechanism for each home row key; and

an additional tactile feedback mechanism distinct from the first tactile feedback mechanism for at least one key adjacent a home row key or at least one peripheral key.

2. The keyboard of claim **1** wherein the additional tactile feedback mechanism comprises:

a second tactile feedback mechanism for at least one key adjacent the home row keys; and

a third tactile feedback mechanism for at least one peripheral key;

wherein the second and third tactile feedback mechanisms are distinct from each other.

3. The keyboard of claim **2** wherein:

the second feedback mechanism is provided for each key adjacent a home row key; and

the third feedback mechanism is provided for each peripheral key.

4. The keyboard of claim **1**, **2**, or **3** wherein the tactile feedback mechanisms are selected from the group consisting of: a single raised dot, two raised dots arranged horizontally, two raised dots arranged horizontally, a raised bar oriented horizontally, and a raised bar oriented vertically.

5. The keyboard of claim **4** wherein the keyboard is a multi-touch surface.

6. The keyboard of claim **5** wherein the feedback mechanism is stamped into a cover of the multi-touch surface.

7. A touch sensitive surface configurable to operate as a keyboard, the touch sensitive surface comprising:

a surface cover;

a touch sensitive electrode circuit board disposed beneath the surface cover having a plurality of holes disposed therein;

an articulating frame disposed beneath the touch sensitive electrode circuit board having integral therewith a plurality of key edge ridges aligned with the holes in the touch sensitive electrode; and

at least one actuator disposed between the articulating frame and an enclosure of the touch sensitive surface and configured to displace the articulating frame so as to extend the key edge ridges through the holes in the touch sensitive electrode circuit board.

8. The touch sensitive surface of claim **7** wherein the surface cover includes a plurality of holes aligned with the holes in the circuit board and wherein the actuator is configured to displace the articulating frame so as to extend the key edge ridges through the holes in the surface cover.

9. The touch sensitive surface of claim **7** wherein the surface cover is attached to the touch sensitive electrode circuit board at a center of a key region such that extending the key edge ridges through the holes in the touch sensitive electrode circuit board forms a concave depression within the key region.

10. A touch sensitive surface according to any of claims **7**, **8**, or **9** wherein the key edge ridges are extended when the device operates in a typing mode and retracted when the device operates in a pointing mode.

11. The touch sensitive surface of claim **10** wherein switching between typing mode and pointing mode is accomplished manually.

12. The touch sensitive surface of claim **11** wherein manual switching is accomplished by at least one of: actuating a switch, pressing a button, touching the surface in a pre-defined region, and performing a pre-determined gesture.

13. The touch sensitive surface of claim **10** wherein switching between typing mode and pointing mode is accomplished automatically.

14. The touch sensitive surface of claim **13** wherein at least one of the following:

the typing mode is activated when asynchronous touches are detected;

the typing mode is deactivated when asynchronous touches are no longer detected;

the typing mode is activated when homing chords are detected;

the typing mode is deactivated when homing chords are no longer detected;

the pointing mode is activated when lateral sliding gestures are detected;

the pointing mode is deactivated when lateral sliding gestures are detected;

the pointing mode is activated when mouse clicking activity chords are detected; and