border between the deformable and undeformable regions. This step may be rectilinear or curvilinear in form, or of any other form.

**[0059]** In a further variation of the referred system **100** in which the substrate **120** defines a cavity **125**, the deformable region **113** may extend into the cavity **125** to contact a wall of the cavity **125** in the retracted state. As shown in FIGS. **24***a*, **24***b*, **25***a*, and **25***b*, the wall of the cavity may define the support member **119**, which may limit inward deformation of the deformable region **113** due to a force applied to the tactile surface **115**. In this variation, the extension of the deformable region **113** into the cavity **125** may be cubic, rectilinear, hemispherical, cylindrical (shown in FIG. **25***a*), conical (shown in FIG. **24***a*), pyramidal, or of any other form. As shown in FIGS. **22***a*-**22***d*, the face(s) of the extension are preferably inset from the face(s) of the cavity **125** to permit the extensions to move unobstructed within the cavity **125** as the deformable region **113** transitions between the retracted and expanded settings. Alternatively and as shown in FIGS. **24***a* and **24***b*, the extension may be tetrahedral or conical in form, wherein at least one wall of the cavity **125** is inclined at a first angle (a "draft" angle) and the extension of the deformable region **113** includes a wall of an included angle matched with the angle of the inclined wall of the cavity **125**. In this example, the inclined face of the extension of the deformable region **113** preferably contacts the inclined wall of the cavity **125** in the retracted setting, wherein the wall of the cavity **125** defines the support member **119** that supports the deformable region **113** against inward deformation in the presence of a force on the tactile surface **115**. However, the extension may be of any other form and the cavity may include a face of any other form matched with the extension.

**[0060]** In a variation of the preferred system **100** in which the deformable region **113** includes an extension into the cavity **125**, the extension and/or the cavity may include a latching feature, as shown in FIGS. **22***a*-**22***d*. The latching feature is preferably a mechanical construction within the tactile layer **110** and/or the substrate **120** that provides tactile feedback, such as in the form of a "click," when the deformable region **113** is depressed. In one example implementation shown in FIGS. **22***a* and **22***b*, the cavity includes a ridge and the extension of the tactile layer **110** includes a lip such that at least one of the lip and the ridge deform as the deformable region **113** is depressed into the cavity, wherein deformation of the lip and/or ridge results in a "click." In this example implementation, the geometry of the lip and ridge can latch the position of the deformable region until a second force is applied, such as by changing fluid pressure within the cavity **125** (e.g., with the displacement device **130**) or by depressing the deformable region. In another example implementation shown in FIGS. **22***c* and **22***d*, the cavity includes a ridge and the extension of the tactile layer **110** includes a lip such that at least one of the lip and the ridge deform as the deformable region **113** is depressed into the cavity, wherein deformation of the lip and/or ridge results in a "click." In this example implementation, the ridge of the cavity is coupled to a bladder or second cavity, wherein displacement of fluid into or out of (or increase or decrease is fluid pressure in) the bladder or second cavity moves the lip into and out of the cavity, respectively, to adjust interference between the lip and the ridge. Generally in this example implementation, the ridge can be moved toward the lip to yield a firmer click, and the ridge can be moved away from the lip to yield a softer click or to unlatch the deformable region **113**. In this example implementation, the cavity **125** can include one or more ridges coupled to one or more bladders or second cavities, and the one or more bladders or second cavities can be coupled to the displacement device **130**, can be coupled to an independent displacement device, and/or can be controlled by any number of valves. In yet another example implementation shown in FIGS. **23***a*-**23***c*, the extension of the deformable region **113** includes a piston that engages a cylinder in the cavity **125**. The extension further includes a lip and the cavity **125** further includes a ridge, as described above. In this example implementation, the cavity **125** and cylinder are filled with the fluid, and as the deformable region is depressed from a first position to a second position, fluid is trapped in the cylinder and compressed by the piston. Once released, the deformable region **113** returns to the first position as the compressed fluid in the cylinder acts as a return spring. Because the lip and/or ridge preferably deform to generate a "click" when the deformable region is depressed from the first position to the second position, and because the lip and/or ridge preferably deform to generate a second "click" when the deformable region returns to the first position, the example implementation can yield tactile feedback that is a double click. Furthermore, the piston and cylinder of this example implementation can also be applied to any of the foregoing example implementations or variations. However, the tactile layer **110**, substrate **120**, and/or any other elements of the preferred system **100** can include any other feature or geometry to provide tactile feedback to a user when the deformable region **113** is depressed.

**[0061]** In another variation of the preferred system **100** in which the deformable region **113** is not of uniform thickness, the attachment surface may extend into the cavity **125**, wherein the deformable region **113** is coupled to the attachment surface at one or more locations within the cavity **125**, as shown in FIGS. **9***a* and **9***b*. However, the deformable and undeformable regions may be of any other form and interface with the cavity **125** and/or support member **119** in any other way; the support member **119** may also be of any other form and operate in any other way to limit inward deformation of the deformable region **113** due to a force applied to the tactile surface **115**.

**[0062]** In still another variation of the preferred system **100**, the tactile layer no includes a recess, opposite the tactile surface **115**, that substantially defines the fluid channel. The tactile layer **110** is preferably coupled to the substrate **120** that is uniform (e.g., continuous) across a face adjacent the tactile layer no. In this variation, the fluid channel can be enclosed by substrate **120**, and the substrate **120** can be physically coextensive with any other the display or touch sensor, which can yield the benefit of reducing the component count of the preferred user interface **100**. In this variation, the tactile layer **110** is preferably selectively bonded to the substrate **120**, wherein a bonded region of the tactile layer **110** defines the undeformable region and a region not bonded to the substrate **120** define the deformable region. However, the tactile layer no, substrate **120**, and fluid channel can be of any other form or geometry.

**[0063]** As a person skilled in the art of will recognize from the previous detailed description and from the figures and claims, modifications and changes can be made to the preferred embodiments of the invention without departing from the scope of this invention defined in the following claims.