

- coupled to the system, and operable to modify at least one condition of the system when manually manipulated; and
- at least one active material element drivenly coupled to the body, and operable to undergo a reversible change in fundamental property when exposed to or occluded from an activation signal, wherein the change causes the body to achieve a second geometric shape, orientation, position or characteristic.
2. The interface as claimed in claim 1, wherein a first geometric shape is presented, and a second geometric shape is manually caused, so as to be customizable, by the user.
3. The interface as claimed in claim 1, wherein the body is selected from the group consisting essentially of knobs, push-buttons, dials, switches, sliders, balls, and rockers.
4. The interface as claimed in claim 1, wherein the body and element are integrally formed.
5. The interface as claimed in claim 1, wherein the body defines an exterior surface, an interior space, and an insulative outer layer, and the element is reposed within the space.
6. The interface as claimed in claim 5, wherein the element is selected from the group consisting essentially of thin strips of piezoceramic bi-morphs, thin films of MR fluid, paraffin wax, and EAP diaphragms.
7. The interface as claimed in claim 1, wherein the body is externally engaged by the element.
8. The interface as claimed in claim 1, wherein the element is selected from the group consisting essentially of shape memory alloys, shape memory polymers, electroactive polymers, paraffin wax, and magnetorheological elastomers.
9. The interface as claimed in claim 1, wherein a first geometric shape is presented, and a second geometric shape is achieved and one of a plurality of achievable shapes by the body.
10. The interface as claimed in claim 1, further comprising:
a source operable to generate the signal, and communicatively coupled, so as to deliver the signal, to the element; and
a controller intermediately coupled to the source and element, and operable to selectively cause the element to be exposed to the signal.
11. The interface as claimed in claim 10, further comprising:
at least one sensor operable to detect a condition and generate a data signal based thereupon, and communicatively coupled, so as to send the data signal, to the controller,
said controller being further configured to cause the change, only when the data signal is received.
12. The interface as claimed in claim 11, wherein the body defines a surface, and the element is configured such that the change causes a raised indicia, trademark, or icon to be formed upon or raised with respect to the surface.
13. The interface as claimed in claim 1, wherein at least a portion of the body in the first shape presents a circular lateral cross-section having a first diameter, and in the second shape presents a lateral cross-section selected from the group consisting essentially of an ellipsoid, a peanut shape, a circular wave-form, a circle having a diameter greater than the first, and a circle having a diameter less than the first.
14. The interface as claimed in claim 1, wherein the body presents a polygonal lateral cross-section having straight sides in the first shape, and convexly or concavely arcuate sides in the second shape.
15. The interface as claimed in claim 1, wherein the body presents a rectangular cross-sectional elevation having a flat top in the first shape, and convexly or concavely arcuate top in the second shape.
16. The interface as claimed in claim 1, wherein the body presents a rectangular cross-sectional elevation defining a first height in the first shape, and a second height substantially different from the first in the second shape.
17. A tactile human-machine interface adapted for facilitating selection and manipulation by a user and for modifying a system, said interface comprising:
a reconfigurable body presenting a first geometric shape, orientation, position or characteristic, and communicatively coupled to and operable to modify at least one condition of the system when manually manipulated;
at least one active material element drivenly coupled to the body, and operable to undergo a reversible change in fundamental property when exposed to or occluded from an activation signal, wherein the change causes the body to achieve a second geometric shape, orientation, position or characteristic,;
a source operable to generate the signal, and communicatively coupled, so as to cause the element to be exposed to the signal;
a controller intermediately coupled to the source and element, and operable to selectively cause the element to be exposed to the signal; and
at least one sensor operable to detect a condition and generate a data signal based thereupon, and communicatively coupled, so as to send the data signal to the controller,
said controller being further configured to cause the change, only when the data signal is received.
18. A method of facilitating selection of a tactile human-machine interface by a user, wherein the interface presents a first geometric shape, orientation, position or characteristic, said method comprising the steps of:
a. securing the interface relative to a source operable to expose the interface to an activation signal;
b. selectively causing the interface to be exposed to the signal;
c. modifying the geometric shape, orientation, position or characteristic of the interface as a result of being exposed to the signal, prior to selection; and
d. discontinuing the signal.
19. The method as claimed in claim 18, wherein step d) further includes the steps of discontinuing the signal, after selection, and reversibly modifying the shape back to the first as a result of discontinuing the signal.
20. The method as claimed in claim 18, wherein step b) further includes the steps of receiving a voice command from the user, and causing the interface to be exposed to the signal only when the command is received.

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