

finger position, with an actuator system which includes electrode pairs 16. The electrodes may be implemented, for example, as printed circuits on the film 20 and the solid, planar surface 15. FIG. 7a illustrates the fluid without the influence of a voltage which is applied to the electrode pairs 16 in the completely fluid state 18. In this state, handwritten characters may be recognized on the touch-sensitive film 20. The writing finger may then effortlessly expel the fluid. The position detection device on the touch-sensitive film is not influenced by this.

[0100] FIG. 7b illustrates a number of electrode pairs 16 with a voltage applied, as a result of which the fluid in the areas 19 is solidified so that it may be sensed by a finger which slides over the film 20. The electrode pairs 16 may be actuated individually, allowing areas of the surface of the operator control panel which have various sizes and various shapes to be sensed and thus made into selectable zones as a function of the modular dimensions of the electrodes.

[0101] FIG. 8 is a cross-sectional view through the operator control panel illustrated in FIG. 5 in a flat state with a magneto-rheological fluid in a reservoir underneath the touch-sensitive film 20, formed for detecting the finger position, with an actuator system which includes magnets 17. The magnets may be moved close to the underside of the solid, planar surface 15 by lifting elements 29 to such an extent that the field strength of the respective magnetic field on the magneto-rheological fluid above the surface 13 is sufficient to the solidify the fluid. The positioning may be carried out, as illustrated in FIG. 8, by movement in the direction of the fluid layer or by rotating the magnets through 90°, as a result of which the field lines extend parallel or perpendicular to the layer, or else by a screen of the field lines by suitable materials. Depending on the number, size and possibility of actuating the magnets, it is possible to sense areas of the surface of the operator control panel which have different shapes, thus permitting them to be made into selectable zones.

[0102] The magnetic fields for solidifying the magneto-rheological fluid may also be generated by coils. However, the use of magnets may provide that after appropriate positioning there is no need for any further power drain for the operating state with the solidified fluid.

[0103] In FIGS. 9a, 9b and 9c various possible manners of structuring the surface of the operator control panel 25 of the operator control device are illustrated. FIG. 9a illustrates the operator control panel 25 with four selectable zones 26 which may serve, for example, to control a cursor, illustrated on the display device 30, in the upward, downward, left-hand and right-hand directions, or to selector input directions. In FIG. 9b, the operator control panel 25 is reconfigured for the operator control of, for example, a telephone keypad with a corresponding arrangement of selectable zones 27. In FIG. 9c, the operator control panel 25 is illustrated with the leveled-out operator control surface for inputting handwritten characters 28.

1-12. (canceled)

13. An operator control device for controlling systems in a motor vehicle by inputs by a user, comprising:

a touch-sensitive operator control panel adapted to represent two surface shapes alternately changeable into

one another, a first surface shape structured to be sensible in a tactile manner and usable to select zones on the operator control panel to select menu items, individual selectable zones configurable differently in shape, extent and position on the operator control panel, a second surface shape smooth in comparison with the first surface shape, the second surface shape adapted for hand-written and graphic input.

14. The device according to claim 13, further comprising an actuator system adapted to configure at least one of (a) the shape and (b) the extent of the selectable zones as individual elements, a division of the touch-sensitive operator control panel into the selectable zones and functional assignment of the selectable zone freely programmable, an entire touch-sensitive operator control panel adapted for hand-written input.

15. The device according to claim 14, wherein the touch-sensitive operator control panel is arranged as a perforation matrix having holes provided with plungers, the plungers electromechanically raisable and lowerable by the actuator system located underneath the operator control panel.

16. The device according to claim 15, wherein the plungers are formed of a light-guiding material and are illuminatable by a light source arranged underneath the operator control panel.

17. The device according to claim 14, wherein a surface of the touch-sensitive operator control panel is arranged as a touch-sensitive film undetachably connected to a planar, fixed underlying surface at an edge of the operator control panel, a space between the underlying surface and the film filled with a Theological fluid solidifiable and fluidizable by the actuator system.

18. The device according to claim 17, wherein the rheological fluid is an electro-rheological fluid, the actuator system adapted to generate electrical fields.

19. The device according to claim 17, wherein the rheological fluid is a magneto-rheological fluid, the actuator system adapted to generate magnetic fields.

20. The device according to claim 13, wherein the operator control device is arranged in directly accessible surroundings of the user, a separate display device for user prompting for operating systems operable by the operator control device arranged in a direct field of vision of the user.

21. The device according to claim 13, wherein the operator control panel is mounted on a pressure-sensitive sensor system.

22. The device according to claim 21, wherein operator control panel is adapted to provide the user with feedback that is sensible in a tactile manner when a pressure point of the pressure-sensitive sensor system is exceeded by pressing on the operator control panel.

23. The device according to claim 13, wherein the operator control panel is surrounded by a housing that is sensible in a tactile manner.

24. The device according to claim 23, wherein the housing includes at least one pushbutton key for special functions.

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