

present specification, a system refers to the logical assembly of a plurality of apparatus, and is not limited to respective apparatus being housed in a single physical unit.

[0148] The present application contains subject matter related to that disclosed in Japanese Priority Patent Application JP 2008-257629 filed in the Japan Patent Office on Oct. 2, 2008, the entire content of which is hereby incorporated by reference.

[0149] It should be understood by those skilled in the art that various modifications, combinations, sub-combinations and alterations may occur depending on design requirements and other factors insofar as they are within the scope of the appended claims or the equivalents thereof.

What is claimed is:

1. A user interface feedback apparatus, comprising:
 - an operable element having a two-layer structure made up of a conductor and an insulator;
 - a sensor configured to detect, in the form of user contact information, at least a user contact position with respect to the insulator of the operable element;
 - a processing unit configured to acquire the detected information from the sensor, and determine parameters for an electrical signal to be output to the conductor; and
 - a tactile control module configured to control the frictional force between the insulator and the user by outputting to the conductor an electrical signal regulated by the parameters determined by the processing unit.
2. The user interface feedback apparatus according to claim 1, wherein
 - the processing unit determines voltage frequency values for an alternating voltage as the parameters of the electrical signal, and
 - the tactile control module outputs to the conductor an electrical signal made up of an alternating voltage having the voltage and frequency values determined by the processing unit.
3. The user interface feedback apparatus according to claim 1, wherein
 - the sensor acquires and provides to the processing unit position information regarding the user contact site, and the processing unit determines electrical signal parameters in accordance with the position information regarding the user contact site acquired from the sensor.
4. The user interface feedback apparatus according to claim 1, further comprising:
 - a display module;
 wherein
 - the processing unit is configured to determine parameters for the electrical signal according to the relationship between the contact position of the user with respect to the operable element obtained as detected information by the sensor, and an image displayed on the display module.
5. The user interface feedback apparatus according to claim 1, wherein
 - the sensor acquires and provides to the processing unit pressure information regarding the user contact site, and the processing unit determines the parameters of the electrical signal in accordance with the pressure information regarding the user contact site acquired from the sensor.
6. The user interface feedback apparatus according to claim 1, wherein
 - the sensor acquires and provides to the processing unit position information regarding the user contact site, and

the processing unit determines the parameters of the electrical signal in accordance with motion information regarding the user contact site that is obtained on the basis of the position information regarding the user contact site acquired from the sensor.

7. The user interface feedback apparatus according to claim 1, wherein
 - the operable element is configured as a two-dimensional plane,
 - the sensor detects the user contact position on the two-dimensional plane in the form of user contact information with respect to the operable element, and
 - the processing unit determines parameters for an electrical signal to be output to the conductor in accordance with the user contact position on the two-dimensional plane.
8. The user interface feedback apparatus according to claim 1, wherein
 - the operable element is configured as a one-dimensional element,
 - the sensor detects the user contact position on the one-dimensional line in the form of user contact information with respect to the operable element, and
 - the processing unit determines parameters for an electrical signal to be output to the conductor in accordance with the user contact position on the one-dimensional line.
9. The user interface feedback apparatus according to claim 1, wherein
 - the sensor detects the user contact position according to electrostatic capacitive coupling.
10. The user interface feedback apparatus according to claim 1, wherein
 - the sensor is configured to include an optical sensor, an electrical sensor, a camera, or a pressure sensor.
11. The user interface feedback apparatus according to claim 1, wherein
 - the apparatus is earth-grounded in order to make the electrical potential of the user equal to the ground potential.
12. A user interface feedback apparatus, comprising:
 - an operable element having a many-layered structure made up of a display module, a transparent conductor, and a transparent insulator;
 - a sensor configured to detect, in the form of user contact information, at least a user contact position with respect to the insulator of the operable element;
 - a processing unit configured acquire user contact position information in the form of the detected information from the sensor, and determine parameters for an electrical signal to be output to the conductor according to relationship between the user contact position and a display position with respect to the display module; and
 - a tactile control module configured to control the frictional force between the insulator and the user by outputting to the conductor an electrical signal regulated by the parameters determined by the processing unit.
13. A user interface feedback method executed in an information processing apparatus, the method comprising the steps of:
 - causing a sensor to detect, in the form of user contact information, at least a user contact position with respect to an insulator constituting part of an operable element having a two-layer structure made up of a conductor and an insulator;