

computer **5000**, when a music CD is insert into computer **5000**, or when iTunes® is active. The function of control **5009** is then adapted to either play the DVD, play the music CD, or to control iTunes® functions. iTunes® is a trade mark for a digital media player application created by Apple Inc. of Cupertino, Calif. In other implementations, invisible contextual controls (not shown) can be used to deactivate a camera, eject a disk or USB stick, or to illuminate the keyboard depending on the state of laptop **5000**. Each of these invisible contextual controls can be made to become visible under appropriate situations (e.g., when the camera is on, the disk or USB stick is in, or if it is dark, respectively). Even the entire keyboard **5020** can be replaced with an array of invisible buttons. In fact, all of the conventional keys, buttons, track pads, etc. on a laptop or other electronic device can be replaced by invisible inputs according to the present invention. In this way, the truly seamless design has become a reality.

[0102] While this invention has been described in terms of several preferred embodiments, there are alterations, permutations, and equivalents, which fall within the scope of this invention. 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, and equivalents as fall within the true spirit and scope of the present invention.

What is claimed is:

1. An electronic device with an invisible input, comprising:
 - a frame having a top face;
 - invisible holes formed in the top face;
 - a capacitive reference on an inner surface of the top face in the area of the invisible holes;
 - an interior wall formed within the frame and separated from the top face;
 - an interior space formed between the top face and the interior wall;
 - a dielectric medium disposed in the interior space;
 - a capacitor plate disposed on a surface of the interior wall opposite to the capacitive reference;
 - a light source disposed in the interior space configured to shine through the invisible holes when lit; and
 - a capacitive sensor electrically connected to the capacitive reference and to the capacitor plate;
 wherein deformation of the frame caused by pressure from an object placed thereon in the area of the invisible holes causes a change in capacitance between the capacitive reference and the capacitor plate that is detected by the capacitive sensor and converted to an electrical signal.
2. The electronic device with an invisible input as recited in claim 1 wherein the capacitive reference is a capacitor plate.
3. The electronic device with an invisible input as recited in claim 1 wherein the capacitive reference is a ground reference.
4. The electronic device with an invisible input as recited in claim 3 wherein the top face of the frame is the ground reference.
5. The electronic device with an invisible input as recited in claim 1 wherein the electrical signal is used to command a button signal.
6. The electronic device with an invisible input as recited in claim 1 wherein the frame is made of metal.

7. The electronic device with an invisible input as recited in claim 1 further comprising supports disposed between the top face and the interior wall.

8. The electronic device with an invisible input as recited in claim 1 wherein the light source comes on as a function of an operating state of the electronic device.

9. The electronic device with an invisible input as recited in claim 1 further comprising

- a second capacitive reference on an inner surface of the top face adjacent to the first capacitive reference; and

- a second capacitor plate disposed on a surface of the interior wall opposite to the second capacitive reference;

- wherein the deformation causes a change in capacitance between the second capacitive reference and the second capacitor plate that is detected by the capacitive sensor and converted to a second electrical signal;

- wherein a relationship between the electrical signals and the second electrical signal indicates a location of the object.

10. The electronic device with an invisible input as recited in claim 9 wherein the location of the object controls a continuous output associated with the electronic device.

11. The electronic device with an invisible input as recited in claim 10 wherein the intensity of the continuous output varies from zero to one hundred percent.

12. The electronic device with an invisible input as recited in claim 9 wherein the location of the object commands a tracking function associated with the electronic device.

13. The electronic device with an invisible input as recited in claim 5 wherein the button signal commands a function of the electronic device that is dependent upon an operating state of the electronic device.

14. The electronic device with an invisible input as recited in claim 1 wherein the invisible holes form a hole pattern indicative of the button function.

15. The electronic device with an invisible input as recited in claim 1 wherein the invisible holes have a diameter ranging between 20 μm and 80 μm , inclusive.

16. An invisible input, comprising:

- a frame having a top face;

- invisible holes formed in the top face;

- a capacitive reference on an inner surface of the top face in the area of the invisible holes;

- an interior wall formed within the frame and separated from the top face;

- an interior space formed between the top face and the interior wall;

- a dielectric medium disposed in the interior space;

- a capacitor plate disposed on a surface of the interior wall opposite to the capacitive reference;

- a light source disposed in the interior space configured to shine through the invisible holes when lit; and

- a capacitive sensor electrically connected to the capacitive reference and the capacitor plate;

- wherein deformation of the frame caused by pressure from an object placed thereon in the area of the invisible holes causes a change in capacitance between the capacitive reference and the capacitor plate that is detected by the capacitive sensor and converted to an electrical signal.

17. The invisible input as recited in claim 16 wherein the capacitive reference is a capacitor plate.

18. The invisible input as recited in claim 16 wherein the capacitive reference is a ground reference.