

to the function “3”, fingertip of the middle fingertip is correlated to the function “D”, fingertip of the ring fingertip is correlated to the function “E”, and fingertip of the little fingertip is correlated to the function “F”. As a person of average skill in the art to which this invention pertains would readily appreciate, additional functions could be defined for this keypad, as well as additional input sensors each with their own defined functions could be added to improve the functionality and user-friendliness of cell phone **1400**.

[0075] The present invention has now been described in accordance with several exemplary embodiments, which are intended to be illustrative in all aspects, rather than restrictive. Thus, the present invention is capable of many variations in detailed implementation, which may be derived from the description contained herein by a person of ordinary skill in the art. All such variations are considered to be within the scope and spirit of the present invention as defined by the following claims and their legal equivalents.

What is claimed is:

1. A system for selecting by a user a function from n functions, wherein said n is at least 2 and wherein said selection of said function is dependent on the identification of said user’s fingertip, comprising:

- (a) an input sensor, wherein said input sensor is associated with said n functions, and said n functions correspond to n fingertips of said user; and
- (b) said user to select said function by selecting only one of said n fingertips at a given time, and only said selected fingertip touches and activates said input sensor.

2. The system as set forth in claim 1, wherein said input sensor is an arbitrary small input sensor.

3. The system as set forth in claim 1, wherein said input sensor is substantially as small as said selected fingertip.

4. The system as set forth in claim 1, wherein said input sensor is substantially larger than said selected fingertip, and said input sensor is equipped with coordinate location mechanism which identifies the coordinate of the point of contact of said selected fingertip with said input sensor.

5. The system as set forth in claim 1, wherein said input sensor comprises a keypad, button, a contact point, a switch, a touchscreen, a trackpad, or a heat-conducting element.

6. The system as set forth in claim 5, wherein said touchscreen comprises additional input sensors, and said input sensor covers only part of said touchscreen.

7. The system as set forth in claim 1, wherein said input sensor comprises tactile stimuli.

8. The system as set forth in claim 1, wherein said input sensor is capable of detecting m_1, \dots, m_n motions respectively corresponding to said n fingertips whereby the total number of selectable functions for said input sensor increases to

$$\sum_{i=1}^n m_i.$$

9. The system as set forth in claim 1, wherein said user is prevented to look at said input sensor or said selected fingertip while said user selects and activates said input sensor.

10. The system as set forth in claim 1, further comprising an imaging means, wherein said imaging means images a part of said user’s hand large enough to identify said selected fingertip that activates said input sensor.

11. The system as set forth in claim 10, wherein said imaging means is a miniature imaging means.

12. The system as set forth in claim 10, wherein said imaging means comprises a visible sensor, an infrared sensor, an ultraviolet sensor, or an ultrasound sensor.

13. The system as set forth in claim 10, wherein said imaging means comprises auto-focus means for automatically focusing said part of user’s hand.

14. The system as set forth in claim 10, wherein said part of said user’s hand comprises the dorsal site of said user’s hand.

15. The system as set forth in claim 10, further comprising a processing means to determine said selected function from said identified fingertip by said imaging means and said correlation of said n functions with said n fingertips of said user.

16. The system as set forth in claim 10, wherein said input sensor is capable of detecting m_1, \dots, m_n motions respectively corresponding to said n fingertips and further comprising a processing means to determine said selected function from said identified fingertip by said imaging means and said correlation of said n functions with said n fingertips of said user and said m_1, \dots, m_n motions corresponding to said n fingertips.

17. The system as set forth in claim 10, further comprising a processing means to output said selected function.

18. The system as set forth in claim 1, further comprising a feedback means to provide said user with feedback over said selected function.

19. A method for selecting by a user a function from n functions, wherein said n is at least 2 and wherein said selection of said function is dependent on the identification of said user’s fingertip, comprising the steps of:

- (a) providing an input sensor, wherein said input sensor is associated with said n functions, and said n functions correspond to n fingertips of said user; and
- (b) selecting by said user said function by selecting only one of said n fingertips at a given time; and

- (c) activating said input sensor with only said selected fingertip, wherein only said selected finger touches said input sensor.

20. The method as set forth in claim 19, wherein said input sensor is an arbitrary small input sensor.

21. The method as set forth in claim 19, wherein said input sensor is substantially as small as said selected fingertip.

22. The method as set forth in claim 19, wherein said input sensor is substantially larger than said selected fingertip, and said input sensor is equipped with coordinate location mechanism which identifies the coordinate of the point of contact of said selected fingertip with said input sensor.

23. The method as set forth in claim 19, wherein said input sensor comprises a keypad, button, a contact point, a switch, a touchscreen, a touchpad, or a heat-conducting element.

24. The method as set forth in claim 23, wherein said touchscreen comprises additional input sensors, and said input sensor covers only part of said touchscreen.