

panel at the same time. The system cannot recognize such a condition. The system may recognize the first touch only, or may confuse the plurality of touches.

[0015] User inputs with the conventional touch sensitive panel are based on the inputs of point information. The shape of an object approaching or the information of the distance to the tip of an approached finger cannot be recognized.

DISCLOSURE OF INVENTION

[0016] An object of the present invention is to provide a good user input apparatus allowing the user to perform input operations by using part of the user's body as with a keyboard or a mouse, a computer connected to the user input apparatus and a control method for the computer connected to the user input apparatus, and a storage medium.

[0017] Another object of the present invention is to provide a good user input apparatus allowing the user to perform input operations without inconvenience even if the user cannot use one hand due to other work while the apparatus is designed such that the user operates the apparatus by both hands, a computer connected to the user input apparatus and a control method for the computer connected to the user input apparatus, and a storage medium.

[0018] Another object of the present invention is to provide a good user input apparatus allowing the user to perform object operations and to input commands to a computer by directly using the tip of a user's finger.

[0019] Another object of the present invention is to provide a good user input apparatus allowing the user to perform object operations and to input commands to a computer in a non-contact manner.

[0020] Another object of the present invention is to provide a good non-contact-type user input apparatus allowing the information of two or more points, the shape of an approaching object, and the information of the distance to an object to be recognized.

[0021] The present invention has been made in consideration of the above-described issues. A first aspect of the present invention is a user input apparatus for receiving data or a command input by the user to a computer, and the user input apparatus is characterized by including:

[0022] user input means for the user to input data or a command by using the user's human body; and

[0023] use-form detection means for detecting a form in which the user uses the user input means by the user's human body.

[0024] The use-form detection means can, for example, determine whether the form in which the user uses the user input means by the user's human body is a usual mode or an unusual mode.

[0025] The computer connected to the user input apparatus can change the operation of the application being executed by the application execution means, according to a detection result obtained by the use-form detection means.

[0026] When the user input means is a keyboard, for example, the use-form detection means can determine whether the user is using the keyboard in a usual mode in which the user can perform key inputs by using both hands

or in an unusual mode in which the user can perform key inputs by using one hand only.

[0027] When the user input means is a mouse, for example, the use-form detection means can determine whether a mouse operation mode in which the user can operate the mouse by using at least one hand or a mouse non-operation mode in which the user releases a user's hand from the mouse so that the user cannot operate the mouse is used.

[0028] When the user input means is formed of a combination of a keyboard and a mouse, for example, the use-form detection means can determine whether a first use mode in which the user can perform key inputs by using both hands or a second use mode in which the user uses the mouse by one hand and can perform key inputs only by the other hand is used.

[0029] The use-form detection means can determine whether an another-terminal use mode in which the user is using a portable telephone or another information terminal by using at least one hand is used.

[0030] Use-form detection means which detects a form in which the user uses a system through a user input apparatus such as a keyboard can, for example, include a transmission electrode disposed almost at the center of the keyboard, a transmitter for supplying alternating current for transmission to the transmission electrode, a first receiving electrode disposed almost at the left end of the keyboard, a second receiving electrode disposed almost at the right end of the keyboard, a first receiver for receiving alternating current flowing through the first receiving electrode, and a second receiver for receiving alternating current flowing through the second receiving electrode.

[0031] In such a case, a first capacitor-equivalent circuit equivalent to a capacitor is formed between the transmission electrode and the first receiving electrode, and a second capacitor-equivalent circuit equivalent to a capacitor is formed between the transmission electrode and the second receiving electrode; and a first subordinate capacitor-equivalent circuit is formed in parallel to the first capacitor-equivalent circuit when a human body approaches the left-hand side of the keyboard, or a second subordinate capacitor-equivalent circuit is formed in parallel to the second capacitor-equivalent circuit when a human body approaches the right-hand side of the keyboard. Therefore, it can be determined whether the user is using the left-hand side and/or right-hand side of the keyboard, according to a change in alternating current flowing through the first or second capacitor-equivalent circuit, the change caused by a change in the capacitance of the first subordinate or second subordinate capacitor-equivalent circuit, generated according to the extent of approaching of the human body.

[0032] Use-form detection means which detects a form in which the user uses a system through a user input apparatus such as a mouse can, for example, include a transmission electrode disposed almost at one end of the mouse, a transmitter for supplying alternating current for transmission to the transmission electrode, a receiving electrode disposed almost at the other end of the mouse, and a receiver for receiving alternating current flowing through the receiving electrode.

[0033] In such a case, a first capacitor-equivalent circuit equivalent to a capacitor is formed between the transmission