matching a combination of a pattern of the received motion and the received key input with the received function.

[0019] The sensing of the motion may include sensing the user's motion using at least one of an angular velocity sensor and an acceleration sensor.

[0020] The sensing of the motion may include sensing the user's motion using the sensor while the key input is being received from the user or using the sensor for a designated period of time after the user's key input.

[0021] The recognizing of the pattern may include recognizing a pattern of a trajectory of the sensed motion, and recognizing one among a designated number of motion patterns as the pattern of the sensed motion.

[0022] Alternatively, the recognizing of the pattern may include extracting a feature of the sensed motion, and recognizing one among a designated number of motion patterns based on the extracted feature.

[0023] The motion pattern may include a leftward motion, a rightward motion, and a standstill.

[0024] According to another aspect of the present invention, there is provided an apparatus for executing a function in a communication terminal, the apparatus including a key input unit generating and outputting a key input signal corresponding to a user's key input, a sensing unit sensing a motion of the user and generating a motion signal corresponding to the sensed motion, a pattern recognition unit recognizing a pattern of the user's motion based on the motion signal, a memory unit storing information regarding a function matched with a combination of a key input and a motion pattern, and a signal generation unit reading the information regarding a function matched with a combination of the key input signal and the recognized motion pattern from the memory unit and generating and outputting a signal corresponding to the function.

[0025] The signal generation unit may generate and output a signal corresponding to a character matched with the combination of the key input signal and the recognized motion pattern.

[0026] The apparatus may further include a pattern input unit receiving one motion pattern among designated motion patterns according from the user, a function input unit receiving a function to be executed from the user, and a first setting unit matching a combination of the motion pattern received from the pattern input unit and the user's key input received from the key input unit with the function received from the function input unit and storing the combination and the function in the memory unit.

[0027] Alternatively, the apparatus may further include a function input unit receiving a function to be executed from the user, and a second setting unit matching a combination of the user's motion received from the sensing unit and the user's key input received from the key input unit with the function received from the function input unit and storing the combination and the function in the memory unit.

[0028] The sensing unit may include at least one of an angular velocity sensor and an acceleration sensor and may sense the user's motion while the user's key input is being received and generate the motion signal corresponding to the sensed motion or may sense the user's motion for a designated period of time after the user's key input and generate the motion signal corresponding to the sensed motion.

[0029] The pattern recognition unit may recognize one among a designated number of motion patterns as the user's motion based on the motion signal and may recognize a pattern of a trajectory of the user's motion based on the motion signal.

[0030] The pattern recognition unit may include a feature extractor extracting a feature of the user's motion from the motion signal, and a pattern selector selecting one among a designated number of motion patterns based on the extracted feature.

[0031] The pattern recognition unit may recognize one among a designated number of motion pattern based on the motion signal using an artificial neural network, template matching, a hidden Markov model, or a SVM.

[0032] Learning may be performed according to the user's selection when the artificial neural network, the template matching, the hidden Markov model, and the SVM are used.

[0033] The motion pattern may include a leftward motion, a rightward motion, and a still motion.

[0034] According to another aspect of the present invention, there is provided an apparatus for setting a function to be executed by a combination of a key input and a motion pattern. The apparatus includes: a key input unit receiving the key input; a pattern selecting section selecting the motion pattern from among a number of motion patterns based on a received motion pattern or a sensed user motion; a function input unit receiving the function to be executed by the combination of the received key input and the selected motion pattern; and a setting unit setting a relationship between the combination and the received function.

[0035] According to another aspect of the present invention, there is provided a method of setting a function to be executed by a combination of a key input and a motion pattern. The method includes: receiving a key input; selecting the motion pattern from among a number of motion patterns based on a received motion pattern or a sensed user motion; receiving a function to be executed by the combination of the received key input and the selected motion pattern; and setting a relationship between the combination and the received function.

[0036] According to other aspects of the present invention, the aforementioned methods can be implemented using a computer readable recording media storing programs for executing the methods.

[0037] Additional and/or other aspects and advantages of the present invention will be set forth in part in the description which follows and, in part, will be obvious from the description, or may be learned by practice of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0038] These and/or other aspects and advantages of the present invention will become apparent and more readily appreciated from the following detailed description, taken in conjunction with the accompanying drawings of which:

[0039] **FIGS. 1A and 1B** illustrate the structures of character input buttons of a mobile phone;