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(54) [TITLE OF THE INVENTION] CHARACTER INPUT DEVICE, CHARACTER INPUT METHOD, AND INFORMATION RECORDING MEDIUM STORING PROGRAM HAVING CHARACTER INPUT FUNCTION

(57) [Scope of Patent Claims]

[Claim 1]

A character input device for instructing and inputting a desired character by an instruction means for instructing any character of character information, in a state where a plurality of character information comprising characters applicable to a specific character type is displayed on a display means, characterized in that

the character input device has

a character information storing means for storing character information, and

a character information display means for displaying a character list display means for displaying character information in a list and a character type display means for displaying a character applicable to at least one character type for any character of the character information on the display means, wherein

the character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on the display means,

when any character in the character list display means is instructed by the instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on a display means, and

when a character applicable to any character type in the character type display means is instructed to be detached by the instruction means, the character information applicable to the character type of a character displayed at the detached position is displayed on the character list display means.

[Claim 2]

The character input device according to claim 1, wherein the character type is a combination of a resonant sound, a voiced sound, a p-sound in the kana syllabary, a contracted sound or a geminate consonant, and a full-width hiragana, a half-width hiragana, full-width katakana or half-width katakana when inputting Japanese characters, and a character type is upper and lower cases when inputting any other languages.

[Claim 3]

The character input device according to claim 1, wherein characters for each character type displayed on the character type display means are respectively arranged in a longitudinal direction, a transverse direction, or in the shape of a grid.

[Claim 4]

The character input device according to claim 1, wherein an instruction means is a pointing device or a mouse pointer for instructing on a tablet.

[Claim 5]

A character input device for instructing and inputting a desired character by an instruction means for instructing any character of character information, in a state where a plurality of character information comprising characters applicable to a specific character type is displayed on a display means, characterized in that

the character input device has

a character information storing means for storing character information, and

a character information display means for displaying a first character list display means for displaying the character information in a list and a character type display means for displaying a character applicable to at least one character type for any character of the character information on the display means, wherein

the first character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on the display means,

when any character in the first character list display means is instructed by the instruction means, a second character list display means showing character information more detailed than those in the first character list display means is displayed on the display means,

when any character in the second character list display means is instructed by the instruction means, the character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means, and

when a character of any character type in the character type display means is instructed by the instruction means and detached from its position, character information applicable to the character type currently displayed at the detached position in the character type display means is displayed on the first character list display means.

[Claim 6]

A character input device for instructing and inputting a desired character by an instruction means for instructing any character of character information, in a state where a plurality of character information comprising characters applicable to a specific character type is displayed on a display means, characterized in that

the character input device has

a character information storing means for storing character information, and

a character information display means for displaying a character list display means for displaying character information in a list and a character type display means for displaying a character applicable to at least one character type for any character of character information on the display means, wherein

a character list display means for displaying a plurality of character information applicable to a specific character type is displayed on the display means,

when any character in the character list display means displayed on the display means is continued to be instructed for a predetermined time by the instruction means, the character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on a display means, and

when any character in the character type display means is instructed by an instruction means so as to slide on the character type display means and detached from its position, the character information applicable to the character type of the character displayed at the detached position in the character type display means is displayed on the character list display means.

[Claim 7]

A character input method, characterized in that

a character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on a display means,

when any character in the character list display means is instructed by an instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means, and

when a character applicable to any character type in the character type display means is instructed to be detached by an instruction means, the character information applicable to the character type of the character displayed at the detached position is displayed on the character list display means.

[Claim 8]

The character input method according to claim 7, wherein

the character type is the combination of a resonant sound, a voiced sound, a p-sound in the kana syllabary, a contracted sound or a geminate consonant, and a full-width hiragana, a half-width hiragana, full-width katakana or half-width katakana when inputting Japanese characters, and a character type is upper and lower cases when inputting any other languages.

[Claim 9]

The character input method according to claim 7, wherein

characters for each character type displayed on the character type display means are respectively arranged in a longitudinal direction, a transverse direction, or in the shape of a grid.

[Claim 10]

A character input method, characterized in that

a first character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on a display means,

when any character in the first character list display means is instructed by an instruction means, a second character list display means showing character information more detailed than those in the first character list display means is displayed on the display means,

when any character in the second character list display means is instructed by the instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means, and

when a character of any character type in the character type display means is instructed by instruction means and detached from its position, the character information applicable to the character type currently displayed at the detached position in the character type display means is displayed on the first character list display means.

[Claim 11]

A character input method, characterized in that

a character list display means for displaying a plurality of character information applicable to a specific character type is displayed on a display means,

when any character in the character list display means displayed on the display means is continued to be instructed for a predetermined time by an instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means, and

when any character in the character type display means is instructed by the instruction means so as to slide on a character type display means and detached from its position, the character information applicable to the character type of a character displayed at the detached position in the character type display means is displayed on the character list display means.

[Claim 12]

An information recording medium, characterized in that

a program that has a character input function is recorded, in which

a character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on a display means,

when any character in the character list display means is instructed by an instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means,

when a character applicable to any character type in the character type display means is instructed to be detached by the instruction means, the character information applicable to the character type of the character displayed at the detached position is displayed on the character list display means.

[Claim 13]

The information recording medium according to claim 12, wherein a program that has a character input function is recorded, in which the character type is the combination of a resonant sound, a voiced sound, a p-sound in the kana syllabary, a contracted sound or a geminate consonant, and a full-width hiragana, a half-width hiragana, full-width katakana or half-width katakana when inputting Japanese character, and a character type is upper and lower cases when inputting any other languages.

[Claim 14]

The information recording medium according to claim 12, wherein a program that has a character input function is recorded, in which characters for each character type displayed on a character type display means are respectively arranged in a longitudinal direction, a transverse direction, or in the shape of a grid.

[Claim 15]

An information recording medium, characterized in that a program that has a character input function is recorded, in which a first character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on a display means,

when any character in the first character list display means is instructed by an instruction means, a second character list display means showing character information more detailed than those in the first character list display means is displayed on a display means,

when any character in the second character list display means is instructed by the instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means, and

when a character of any character type in the character type display means is instructed by instruction means and detached from its position, the character information applicable to the character type currently displayed at the detached position in the character type display means is displayed on the first character list display means.

[Claim 16]

An information recording medium, characterized in that a program that has a character input function is recorded, in which a character list display means for displaying a plurality of character information applicable to a specific character type is displayed on a display means,

when any character in the character list display means displayed on the display means is continued to be instructed for a predetermined time by an instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on the display means, and

when any character in the character type display means is instructed by the instruction means so as to slide on the character type display means and detached from its position, the character information applicable to the character type of a character displayed at the detached position in the character type display means is displayed on the character list display means.

[Detailed Description of the Invention]

[0001]

[Field of the Invention]

This invention relates to a character input device for inputting a character, a character input method, and an information recording medium in which a program that has a character input function is recorded.

[0002]

[Prior Art]

In recent years, the development in the information industry triggers a practical use of various information. For example, a personal computer, information portable terminal equipment (hereinafter will be called information equipment), and the like, are used to manage business and individual information and to further use this information. For example, when the above-mentioned information equipment is used as an example, this information equipment is operated by a user using a predetermined pointing device, for example, to operate a screen displayed by a predetermined software installed in a display unit provided to the information equipment. Such screen employs a

user interface usually called GUI (Graphical User Interface) to allow easy operation by a user. There have been many competitions to improve performance and to make such information equipment smaller and smaller to allow easy portability by a user.

[0003]

Thus, the smaller the information equipment is, the smaller the display surface area of a display unit naturally becomes. Therefore, the object to be displayed on a display unit by a predetermined software becomes small, deteriorating the operability of GUI, which is a drawback. For example, drawbacks in a software keyboard which is an object to be displayed on a display unit as an example will specifically be described below. A “software keyboard” refers to the software that has a keyboard function that can input a character into the information equipment.

[0004]

[Problem to be Solved by the Invention]

FIG. 25-FIG. 27 are drawings respectively illustrating a conventional software keyboard in the display state displayed on a display unit.

In FIG. 25, a software keyboard 106 has a full-width hiragana display area 107, a full-width katakana display area 108, and a half-width katakana display area 109, for example.

Therefore, when the software keyboard 106 is displayed on a display unit having a small display area, each character becomes small and hard to see, so a large display area according to the character type such as hiragana and katakana, and full width and half width, becomes necessary.

[0005]

In FIGS. 26(A)-(C), the software keyboard 106 is devised so that the character information of a plurality of character types is displayed on one screen in order to eliminate the drawback shown in FIG. 25. Therefore, the software keyboard 106 has a full-width hiragana button 106a, a full-width katakana button 106b, and a half-width katakana button 106c, for example, in addition to the display area for displaying the character information. With the software keyboard 106 shown in FIGS. 26 (A)-(C), a user needs to operate each button to display the character information by distinguishing the full-width hiragana, the full-width katakana, and the half-width katakana as a character type.

[0006]

In FIG. 27, the software keyboard 106 is provided with input sections (a voiced sound key 106e and a p-sound key 106f, or a small character button 106b [sic: d] shown in FIG. 27) in order to reduce the size of display area of the character information as shown in FIGS. 26 (A)-(C); these input sections are used for adding a voiced sound mark or a P-sound consonant mark, or for converting an upper case display to a lower case display or vice versa in the software keyboard capable of inputting Roman alphabets. In such a software keyboard 106, a user must switch to the character information according to the desired character type every time.

[0007]

The objective of the present invention is to eliminate the problems described above and to provide a character input device that can perform a character input simply and correctly and has a small display area of a character list display means, as well as to provide a character input method, and an information recording medium for storing a program having a character input function.

[0008]

[Means for Solving the Problem]

In the present invention, the objective described above is achieved by a character input device for instructing and inputting a desired character by an instruction means for instructing any character of the character information, in a state where a plurality of the character information comprising characters applicable to a specific character type are displayed on a display means, characterized in that the character input device has a character information storing means for storing the character information, and a character information display means for displaying a character list display means for displaying the character information in a list and a character type display means for displaying a character applicable to at least one character type for any character of the character information on a display means; wherein the character list display means for displaying a plurality of character information comprising characters applicable to a specific character type is displayed on a display means; when any character in the character list display means is instructed by the instruction means, a character type display means for displaying a character applicable to at least one other character type corresponding to the instructed character is displayed on a display means; and when a character applicable to any character type in the character type display means is instructed to be detached by the instruction means, the character information applicable to the character type of the character displayed at the detached position is displayed on a character list display means.

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