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Claims 3 pages; Description 6 pages; Drawings 7
pages

[54] **Title of the invention**

A mobile telecommunications terminal having
multiple screens and a menu display control method
of the same

[57] **Abstract**

The present invention relates to a mobile
telecommunications terminal having multiple screens and
a menu display control method of the same, comprising
the following components: a terminal body; a terminal
flip cover, which is superimposed on the terminal body
and is rotatable; a first screen, which is formed on the
terminal flip cover and is capable of displaying menus; a
second screen, which is formed on the terminal body and
is capable of displaying the submenu of the item
corresponding to the position of the cursor on the menu;
wherein it is further possible to simultaneously view the
first screen and the second screen. The present invention
enables users to easily obtain information about the
currently running main menu and its submenu without
having to perform an additional operating step and to run
desired operations directly from the submenu, thus
enhancing user convenience.

1. A mobile telecommunications terminal having multiple screens, characterized in that it comprises the following components:

a terminal body;

a terminal flip cover, which is superimposed on said terminal body and is rotatable;

a first screen, which is formed on said terminal flip cover and is for displaying menus;

a second screen, which is formed on said terminal body and is for displaying the submenu of the item corresponding to the position of the cursor on said menu;

wherein it is further being possible to simultaneously view said first screen and said second screen.

2. The mobile telecommunications terminal having multiple screens as described in claim 1, characterized in that:

by moving the cursor of the submenu displayed on said second screen to select an item from the items of the submenu, the selected item of the submenu can be run directly.

3. The mobile telecommunications terminal having multiple screens as described in claim 2, characterized in that:

if one item in said submenu is selected to be run, said first screen will display the running of the item.

4. The mobile telecommunications terminal having multiple screens as described in any of claims 1 through 3, characterized in that:

it further has one cursor-moving button able to move the displayed cursor position between said first screen and said second screen.

5. The mobile telecommunications terminal having multiple screens as described in claim 4, characterized in that:

said cursor position is subjected to different settings according to the following three situations: said cursor-moving button is short-pressed; said cursor-moving button is long-pressed; said cursor-moving button is short-pressed twice.

6. The mobile telecommunications terminal having multiple screens as described in claim 5, characterized in that:

when said cursor-moving button is long-pressed, said cursor is displayed on said first screen; and when said cursor-moving button is short-pressed, said cursor is displayed on said second screen.

7. The mobile telecommunications terminal having multiple screens as described in claim 4, characterized in that:

if said cursor-moving button is pressed when said cursor is located on said first screen, control over said cursor is passed to said second screen; and if said cursor-moving button is pressed when said cursor is located on said second screen, control over said cursor is passed to said first screen.

8. The mobile telecommunications terminal having multiple screens as described in claim 4, characterized in that:

said mobile telecommunications terminal further comprises a keypad for inputting information; and

said cursor-moving button is a button formed on said keypad.

9. The mobile telecommunications terminal having multiple screens as described in any of claims 1 through 3 or 5 through 8, characterized in that:

at least one of said first screen and said second screen is formed from a touch panel.

10. The mobile telecommunications terminal having multiple screens as described in claim 4, characterized in that:

at least one of said first screen and said second screen is formed from a touch panel.

11. A menu display control method that uses a mobile telecommunications terminal having multiple screens, being a method for controlling a mobile telecommunications terminal having multiple screens wherein a first screen and a second screen may be simultaneously viewed, characterized in that it comprises the steps below:

a menu display step: displaying a menu in the first screen;

a submenu display step: displaying the submenu of a corresponding item in said second screen based on the movement of the cursor in said menu display step.

12. The menu display control method that uses a mobile telecommunications terminal having multiple screens as described in claim 11, characterized in that:

prior to said menu display step, it further comprises a menu exporting step: commanding display of the top-level menu in the first screen.

13. The menu display control method that uses a mobile telecommunications terminal having multiple screens as described in claim 11, characterized in that:

it further comprises a submenu run step: moving the cursor of said submenu displayed on said second screen, and selecting an item from among the items of said submenu to directly run the selected item of said submenu.

14. The menu display control method that uses a mobile telecommunications terminal having multiple screens as described in claim 13, characterized in that:

if an item in said submenu is selected for running, said first screen displays the running of that item.

15. The menu display control method that uses a mobile telecommunications terminal having multiple screens as described in claim 11, characterized in that:

it further comprises a cursor position selection step: selecting a position in said menu or said submenu to display said cursor.

16. The menu display control method that uses a mobile telecommunications terminal having multiple screens as described in claim 15, characterized in that:

said cursor position selection step may be the selection of either said menu or said submenu based on short-pressing or long-pressing a fixed cursor-moving button on said mobile telecommunications terminal.

A Mobile Telecommunications Terminal Having Multiple Screens and a Menu Display Control Method of the Same

Field of the Invention

The present invention relates to a mobile telecommunications terminal having multiple screens and a menu display control method of the same and particularly relates to a mobile telecommunications terminal having multiple screens and a menu display control method of the same wherein a menu displayed on a first screen has a submenu that is displayed on a second screen, thus enabling users to understand the menus more easily and to use multiple functions with greater convenience.

Background of the Invention

In general, mobile telecommunications terminals were initially used for wireless voice communications, but as their array of features increasingly diversified, mobile telecommunications terminals moved beyond voice communication features to features that enable Internet, multimedia, and other visual services.

FIG. 1 is a structural side view of a conventional mobile telecommunications terminal; as shown in the drawing, the mobile telecommunications terminal with a built-in camera is composed of a body 20 and a flip cover 30 that can be opened or closed using a hinge component 40 on its top side.

The body 20 comprises the following components: a body case 23, which encapsulates circuitry used for communication control of the mobile telecommunications terminal; a rechargeable battery 22, which is mounted on the back of the body case 23 and is detachable; a camera 10, which is mounted at the upper end of the front of the body case 23.

The flip cover 20 comprises the following components: a flip cover case 32, which encapsulates a main screen (not shown in the drawing) that displays multiple types of information; an auxiliary screen 31, which is located in the center of the front of the flip cover case 32 and provides basic terminal information; an acoustic transmission hole 33, which is formed at the lower end of the front of the flip cover case 32 and is for transmitting sound waves from a speaker mounted within the flip cover case 32.

However, the mobile telecommunications terminal having the structure described above suffers from the following limitations: because the auxiliary screen 31 is formed on the front of the terminal flip cover 30, it can only execute a time display function, a call notification function, or a text message receiving function. That is, in the past, the user had to resort to other operating

steps to implement main functions or related adjustment functions within the limited space of the main screen. Users thus had to deal with the problem of additional, tedious operating steps.

Furthermore, if the user wishes to have a full description of the functions relating to items selected from the menu and the submenus for those items, the user will have to take the trouble to enter into the selected items one at a time.

Summary of the Invention

The present invention was put forward in order to solve the problems of the conventional art described above, and its object is to provide a mobile telecommunications terminal having multiple screens and a menu display control method of the same, comprising, in addition to a first screen displaying the currently running operation, a second screen that may be viewed simultaneously with the first screen, the second screen displaying the submenu of a corresponding item in a menu displayed on the first screen, thus enabling the user to easily obtain information about a submenu of the menu displayed on the first screen without having to perform an additional operating step.

Another object of the present invention is: an operation in the submenu can be run directly by making a selection in the submenu displayed on the second screen, enabling the user to directly and conveniently run operations corresponding to the submenu and thus to perform operations more conveniently.

To realize the objects described above, the mobile telecommunications terminal having multiple screens that is provided by the present invention comprises the following components: a terminal body; a terminal flip cover, which is superimposed on the terminal body and is rotatable; a first screen, which is formed on the terminal flip cover and is capable of displaying menus; a second screen, which is formed on the terminal body and is capable of displaying the submenu of the item corresponding to the position of the cursor on the menu; wherein it is further possible to simultaneously view the first screen and the second screen.

That is, a user may simultaneously view the first screen and the second screen, and a submenu of the menu running on the first screen may be displayed in tandem on the second screen, thus enabling the user to know what the submenu is without having to confirm the submenu a step at a time, thereby increasing user convenience.

At the same time, by moving the cursor on the submenu displayed on the second screen to select an item from the submenu, it is possible to directly run the selected item of the submenu and thus to spare the user the effort and time involved in searching menus.

In this case, the first screen and the second screen may be constructed from one liquid crystal screen, and the one liquid crystal screen may be partitioned into multiple screens for separate display, thus constituting the first screen and the second screen. Moreover, the screens may be formed from touch panels.

In another aspect relating to another field of the present invention, being a method for controlling a mobile telecommunications terminal having multiple screens comprising a first screen and a second screen that may be simultaneously viewed, wherein a menu display control method that uses a mobile telecommunications terminal having multiple screens is provided, comprising the steps below: a menu display step: displaying a menu on the first screen; a submenu display step: displaying on the second screen the submenu of an item corresponding to the movement of the cursor in the menu display step.

The benefit of the present invention lies in the fact that it enables the user to easily obtain information about both the main menu that is currently running and a submenu without having to perform an additional operating step.

Moreover, in the present invention, by moving the cursor of the submenu displayed on the second screen to select an item from the submenu, it is possible to directly run the selected item of the submenu and thus to spare the user the effort and time involved in searching menus.

Description of the Drawings

FIG. 1 is an oblique view of the structure of a conventional mobile telecommunications terminal.

FIG. 2 is an oblique view showing the constituent parts of a mobile telecommunications terminal of a possible application of the present invention.

FIG. 3 is an oblique view of the structure formed from touch panels of the mobile telecommunications terminal screens shown in FIG. 2.

FIG. 4 is an oblique view showing the constituent parts of another mobile telecommunications terminal of a possible application of the present invention.

FIG. 5 is a front view of a mobile telecommunications terminal displaying a top-level menu of the present invention.

FIGS. 6a and 6b are sketches of the first screen displaying a menu and of the second screen displaying a submenu of a corresponding item of the menu in a mobile telecommunications terminal having multiple screens in an embodiment of the present invention.

Key to the drawings:

100: Mobile telecommunications terminal	110: Terminal body
112: Keypad	112a: Menu button
116: Second screen	117: Cursor-moving button
120: Terminal flip cover	122: First screen
122a: Cursor	

Specific Embodiments

Embodiments of the present invention are explained in detail below with reference to the drawings.

FIGS. 2 and 3 show the structure of a mobile telecommunications terminal of a possible application of the present invention. As shown in FIGS. 2 and 3, the mobile telecommunications terminal of a possible application of the present invention is constructed from several components: a terminal body 110, in which is installed circuitry for controlling communications, etc.; a terminal flip cover 120, which is superimposed on the terminal body 110, is secured and rotatable, and displays various types of information in images.

The terminal body 110 has the following components: a body case 111, which encapsulates circuitry for controlling telecommunications, etc.; a keypad 112, which is formed on the front of the body case 111 and is capable of inputting information; a microphone 113, which is capable of transmitting the user's voice to another party; a battery 114, which is installed in the back of the body case 111 and is detachable; a second screen 116, which displays many types of operations of the mobile telecommunications terminal or lists of such operations; an inclined protruding part 115, which is for mounting the second screen 116 and enabling the user to view the second screen 116 from a comfortable, approximately perpendicular angle.

The terminal flip cover 120 comprises the following components: a first screen 122, which is formed on the back of the terminal flip cover 120, displays various types of information in images, and in particular displays an image of the subject during picture-taking; a flip cover case 121, which encapsulates the first screen 122; and a first camera 124, which is for taking pictures.

Moreover, the first screen 122 and the second screen 116 are formed from touch panel-type screens, on which writing or drawing is done by hand or with a stylus and that may serve as input devices.

FIG. 4 is an oblique view of the structure of another mobile telecommunications terminal of a possible application according to another aspect of the present invention. As shown in FIG. 4, in a mobile telecommunications terminal 300 such as a PDA having only one screen 320, the screen 320 is partitioned into two areas: a first screen 321 and a second screen 322, which may be controlled to display separately; it is possible in such a situation to realize the same functions as the mobile telecommunications terminal 100 that was described previously.

The number 312 in the drawing, which has not yet been explained, is the keypad used for input in the mobile telecommunications terminal 300.

When referring below to a mobile telecommunications terminal (100, 300) having a first screen (122, 321) and a second screen (116, 322) that can separately (2 or more) display, the

example of the mobile telecommunications terminal shown as number 100 in the drawing will be used to explain in detail the operating principles of the present invention.

FIG. 5 is a front view of a mobile telecommunications terminal displaying a top-level menu of the present invention; when wishing to

use the mobile telecommunications terminal 100 to perform an operation, the user presses the menu button 112a, and the top-level menu is then displayed on the first screen 122, as shown in FIG. 5. At this point, the user may operate the direction key on the keypad 112 to position the cursor 122a over a specific item in the top-level menu; the item under the cursor 122a is displayed as larger than the other icons to make it easy to know which item is under the cursor 122a. Moreover, the second screen 116 displays the submenu corresponding to the top-level menu item under the cursor 122a in the first screen 122, thus making it easy for the user to know what the submenu is under the top-level menu. That is, the menu for the Send Message item displayed on the first screen 122 is displayed on the second screen 116.

According to another aspect, although the embodiment of the present invention displays the top-level menu in the form of icons, the scope of the present invention is not limited thereto and may also take the form of a text list.

If the Send Message item under the cursor 122a is selected in the top-level menu shown in FIG. 5, the screen switches to the one shown in FIG. 6a. That is, the first screen 122 displays the Send Message menu, and the second screen 116 automatically displays the submenu for the menu item under the cursor 122a in the first screen 122.

At this point, if the user short-presses the cursor-moving button 117 formed on the side of the terminal body 110, control over the cursor 122a will pass to the second screen 116. That is, if, after short-pressing the cursor-moving button 117, the user operates the direction keys, the cursor 122a will move on the submenu displayed on the second screen 116. Conversely, when wishing to regain control over the items in the menu at the next level up, the user long-presses the cursor-moving button 117, control over the cursor 122a passes to the first screen 122.

At this point, when the cursor 122a is on the first screen 122, control over the cursor 122a will be passed to the second screen 116 if the cursor-moving button 117 is pressed, regardless of whether the cursor-moving button 117 is short-pressed or long-pressed; when the cursor 122a is on the second screen 116, control over the cursor 122a will be passed to the first screen 122 if the cursor-moving button 117 is pressed again. In this case, the cursor-moving button may also differ from the one shown in the drawing and instead be a button formed on the keypad 112.

According to another aspect, when control over the cursor 122a is displayed in the second screen 116, if an item in the submenu is selected and there is a further submenu for this item, its submenu will be displayed in the second screen 116, and the selected menu will be displayed on the first screen 122. In addition, if

there is no further submenu for the item selected in the submenu, the selected item will mean a run command, and the corresponding item will be run directly. At this point, if an item of the submenu displayed on the second screen 116 is selected for running, the selected item will run on the first screen 122, and the first screen 122 will be powered up.

For example, with regard to the Send Message menu of FIG. 6a, the first screen 122 displays a menu for selecting the message category, and the second screen 116 displays the submenu for “1. Text Message” under the cursor 122a in the first screen 122. That is, without having to perform an additional operating step, the user can easily confirm that Write Message, Inbox, Outbox, Draft, and Template are found in the Text Message submenu.

If the user then wishes to pass control over the cursor 122a to the second screen 116, all that will be necessary is to short-press the cursor-moving button 117. Thus, after moving the cursor to the “1. Write message” item, if the user presses the selection button, then, as shown in FIG. 6b, “Write Message” will be run immediately in the first screen 122. By the same token, if the user moves the cursor to Inbox in the submenu displayed on the second screen 116 and selects it, the user may directly run Inbox without having to pass through the two-step process involving “Text Message” and “Inbox.”

As explained above, the benefit of the present invention lies in the fact that the present invention provides a mobile telecommunications terminal having multiple screens and a menu display control method of the same; it contains, in addition to a first screen displaying the currently running operation, a second screen that may be viewed simultaneously with the first screen, the second screen displaying the submenu of a corresponding item of a menu displayed on the first screen, thus enabling the user to easily obtain information about the currently running main menu and its submenu without having to perform an additional operating step.

Moreover, in the present invention, by moving the cursor on the submenu displayed on the second screen to select an item from the submenu, it is possible to directly run the selected item of the submenu and thus to spare the user the effort and time involved in searching menus.

The specific embodiments above are only for explaining the present invention and are not for limiting the present invention.

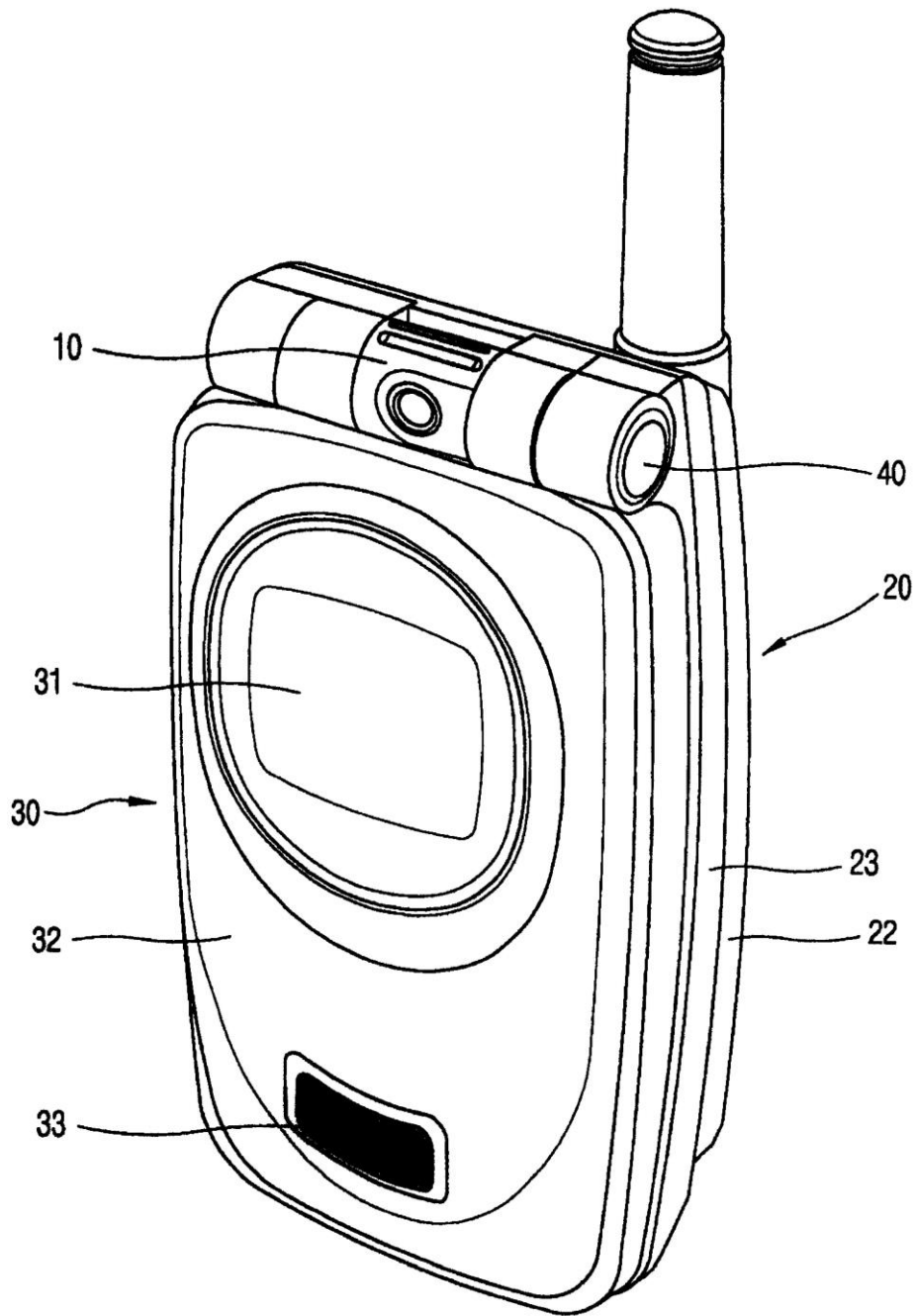


FIG. 1

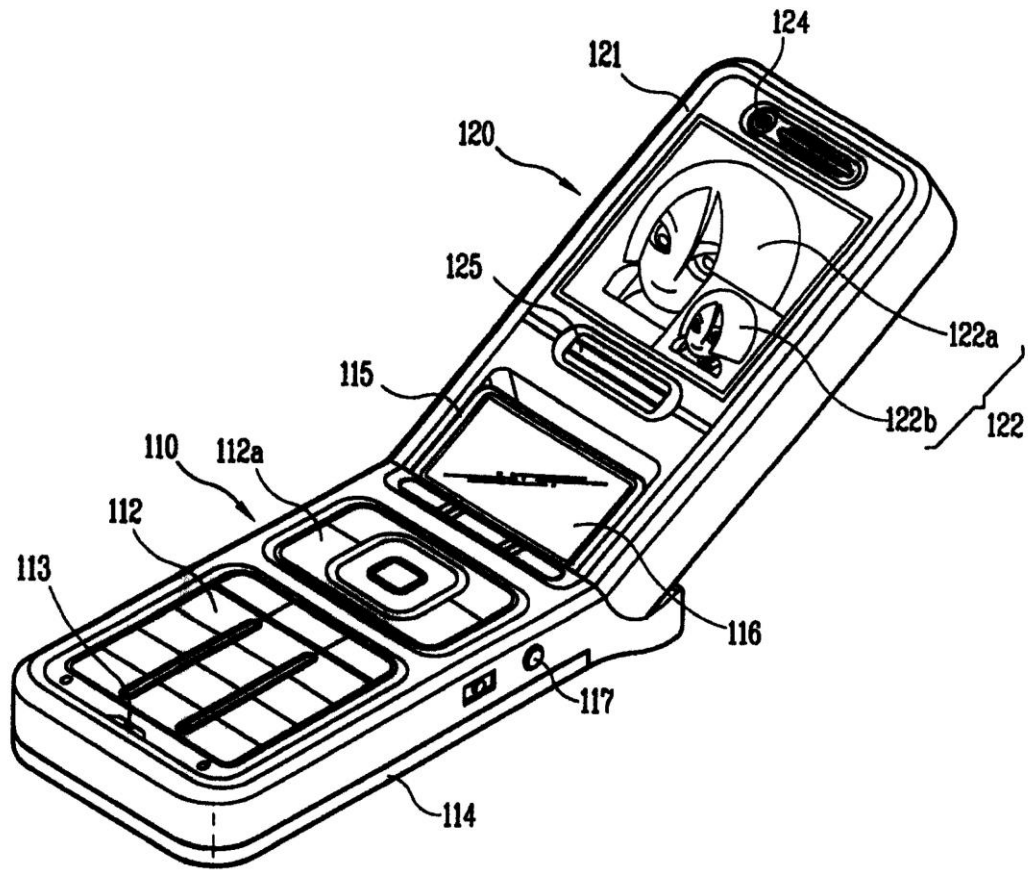


FIG. 2

12

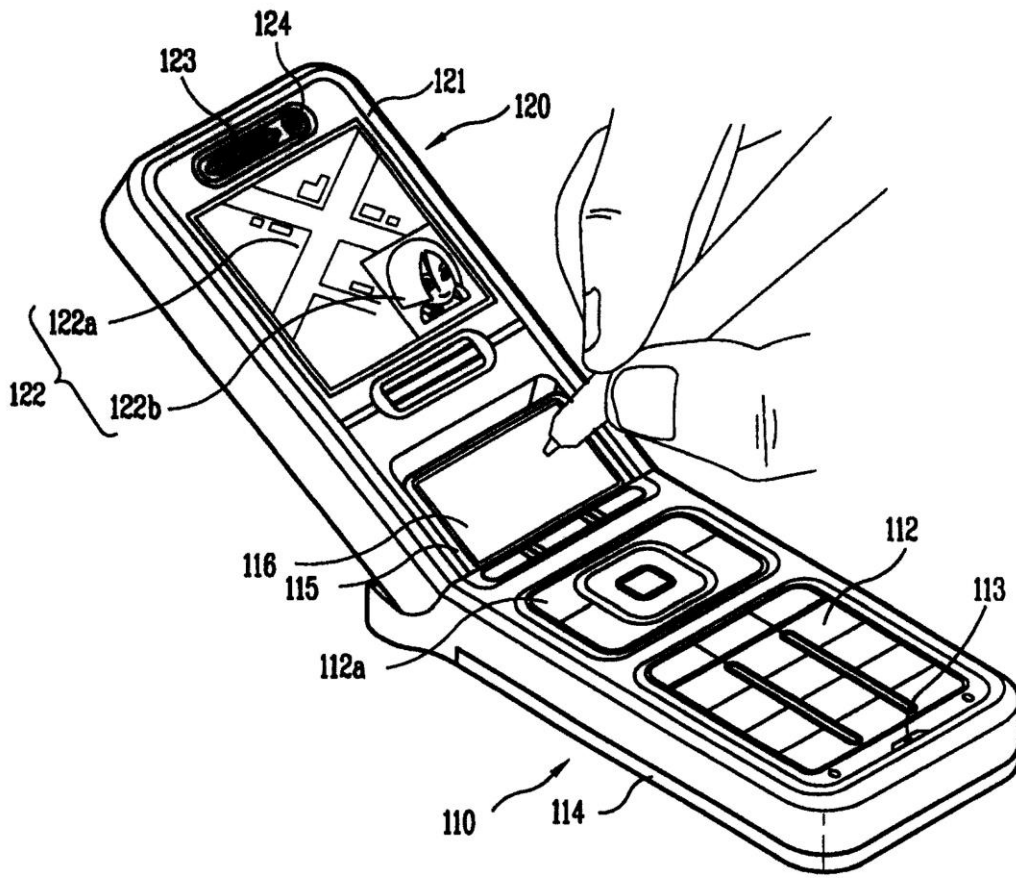


FIG. 3

13

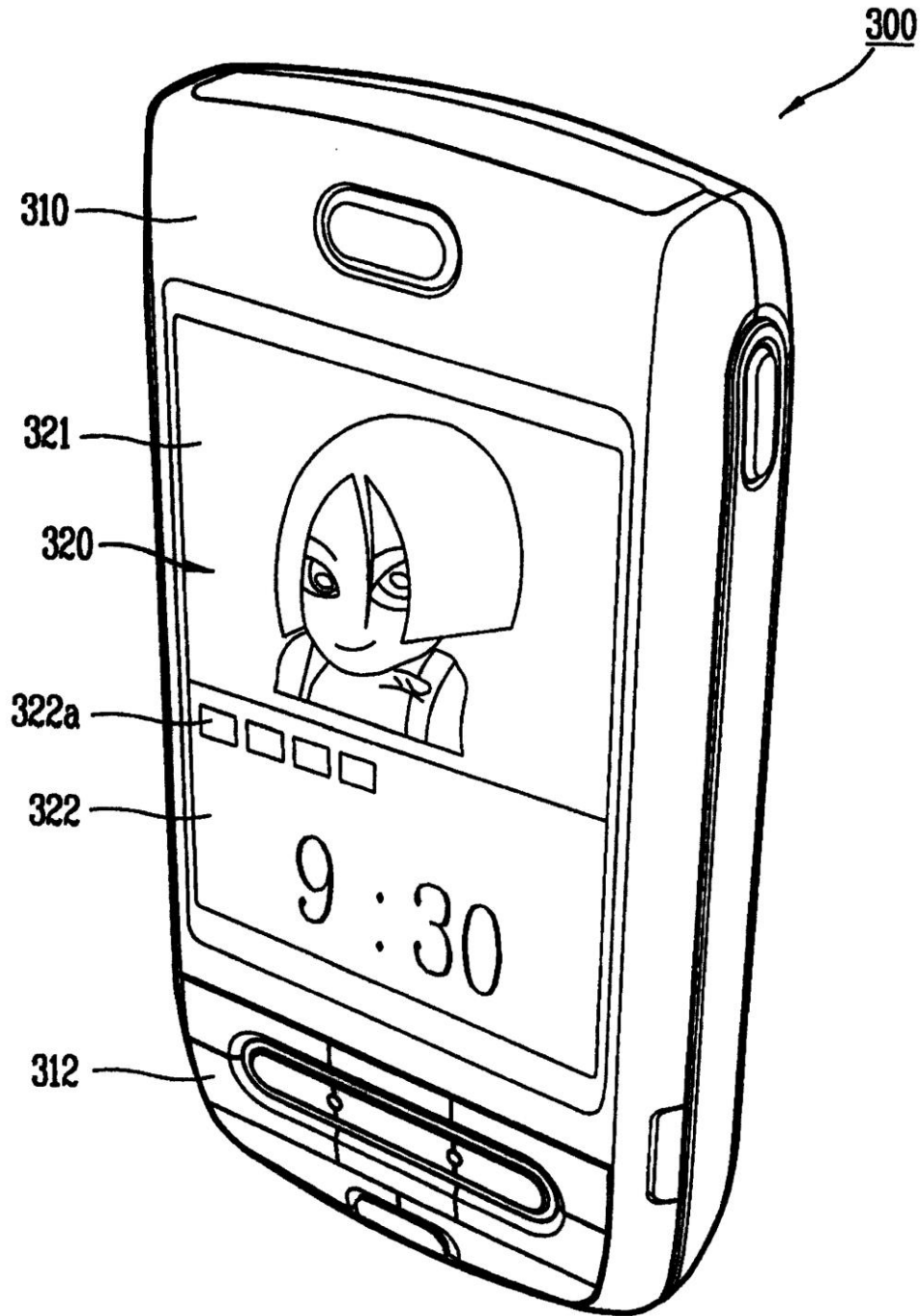


FIG. 4

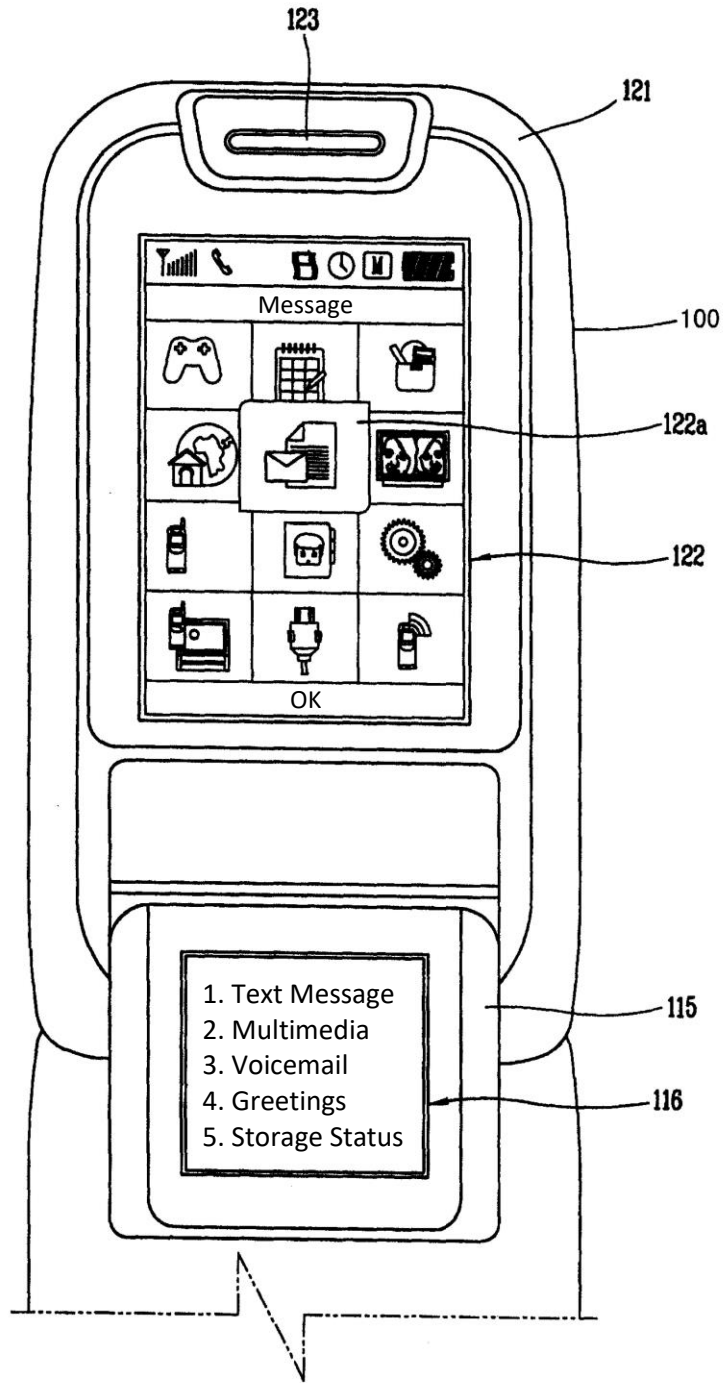


FIG. 5

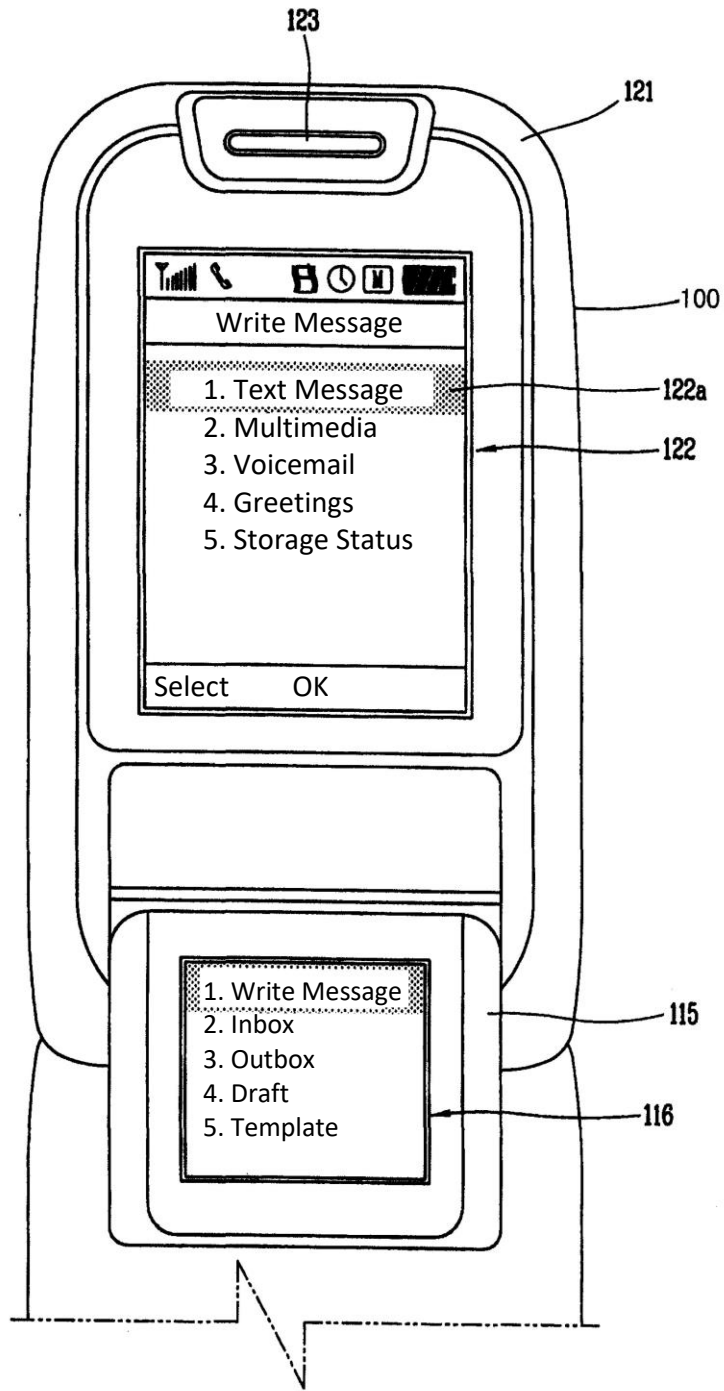


FIG. 6a

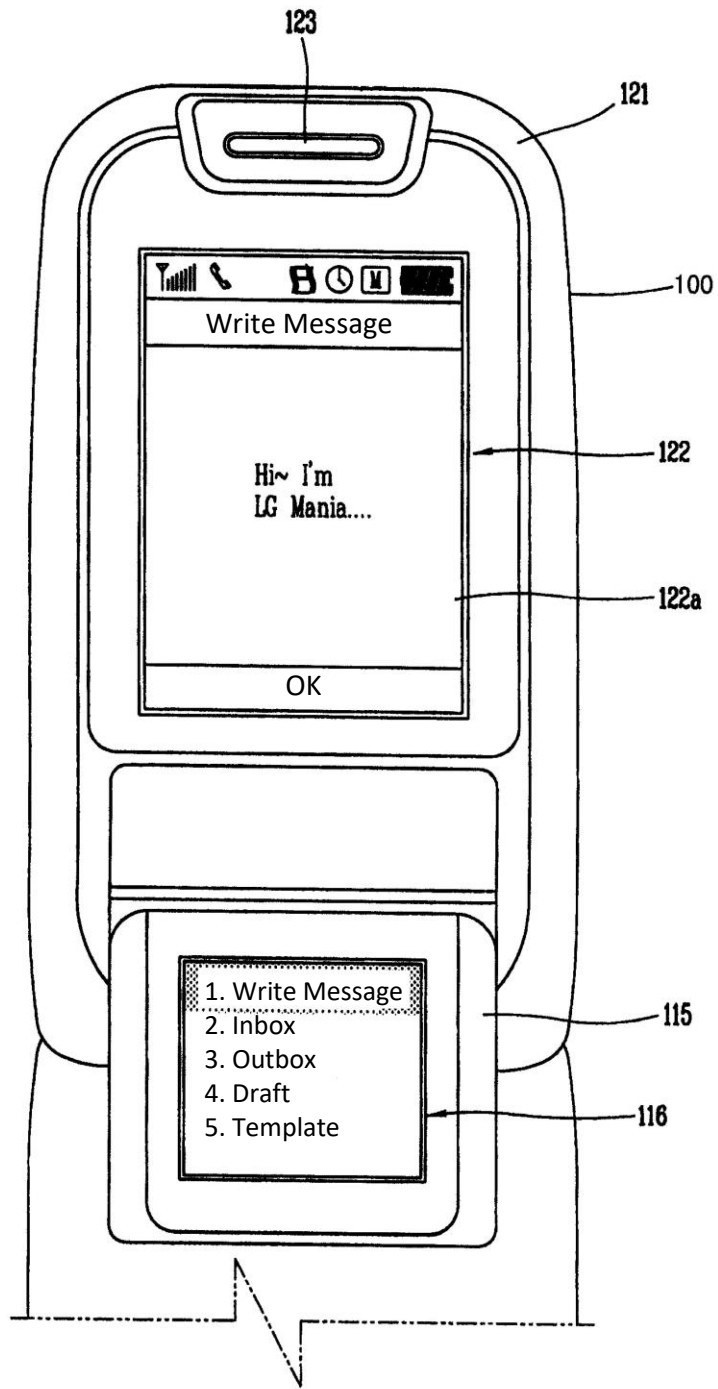


FIG. 6b

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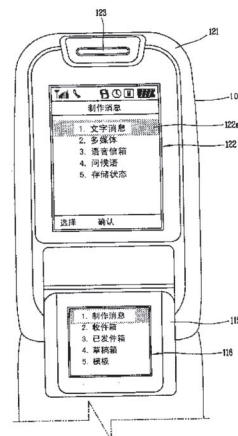
权利要求书 3 页 说明书 6 页 附图 7 页

[54] 发明名称

具有多个屏幕的移动通信终端及其菜单列表显示控制方法

[57] 摘要

本发明涉及具有多个屏幕的移动通信终端及其菜单列表显示控制方法，它包括如下几个部分：终端机身；终端翻盖，与上述终端机身重叠并可转动；第 1 屏幕，形成于上述终端翻盖上，可以显示菜单列表；第 2 屏幕，形成于上述终端机身上，可以显示上述菜单列表的光标位置所在的相应项目的下级菜单列表；而且可以同时查看上述第 1 屏幕与上述第 2 屏幕。本发明使用户无需另外的操作，便可以轻松获得关于正在运行的主菜单列表及其下级菜单列表的信息，可以直接从下级菜单列表直接运行需要的作业，以此提高用户的便利。



1. 一种具有多个屏幕的移动通信终端，特征是包括如下几个部分：
终端机身；
终端翻盖，与所述的终端机身重叠并可转动；
- 5 第 1 屏幕，形成于所述的终端翻盖上，用于显示菜单列表；
第 2 屏幕，形成于所述的终端机身上，用于显示所述的菜单列表的光标位置的相应项目的下级菜单列表；
而且能够同时查看所述的第 1 屏幕与所述的第 2 屏幕。
2. 根据权利要求 1 所述的具有多个屏幕的移动通信终端，其特征是：
10 通过移动所述的第 2 屏幕中显示的下级菜单列表的光标，选择下级菜单列表项目中的某一项，能够直接运行下级菜单列表的选择项目。
3. 根据权利要求 2 所述的具有多个屏幕的移动通信终端，其特征是：
如果选择所述的下级菜单列表中的一个项目运行，所述的第 1 屏幕中则显示该项目的运行。
- 15 4. 根据权利要求 1 至 3 任意一项所述的具有多个屏幕的移动通信终端，其特征是：
还具有一个能够分别相互移动所述的第 1 屏幕与所述的第 2 屏幕中显示的光标的位置的光标移动按钮。
5. 根据权利要求 4 所述的具有多个屏幕的移动通信终端，其特征是：
20 当短按所述的光标移动按钮时，当长按所述的光标移动按钮时，当短按 2 次所述的光标移动按钮时，根据以上三种情形对所述的光标的位置进行不同设置。
6. 根据权利要求 5 所述的具有多个屏幕的移动通信终端，其特征是：
当长按所述的光标移动按钮时，所述的光标显示于所述的第 1 屏幕，当
25 短按所述的光标移动按钮时，所述的光标显示于所述的第 2 屏幕。

7. 根据权利要求4所述的具有多个屏幕的移动通信终端，其特征是：

在所述的光标位于所述的第1屏幕中的状态下，如果按下所述的光标移动按钮，则所述的光标的控制权交给所述的第2屏幕；在所述的光标位于所述的第2屏幕中的状态下，如果按下所述的光标移动按钮，则所述的光标的
5 控制权交给所述的第1屏幕。

8. 根据权利要求4所述的具有多个屏幕的移动通信终端，其特征是：

所述的移动通信终端还包括一个用于输入信息的键区；

所述的光标移动按钮由所述的键区中的某一个按钮形成。

9. 根据权利要求1至3、或5至8中任意一项所述的具有多个屏幕的移
10 动通信终端，其特征是：

所述的第1屏幕与所述的第2屏幕中至少一个以上由触摸板形成。

10. 根据权利要求4所述的具有多个屏幕的移动通信终端，其特征是：

所述的第1屏幕与所述的第2屏幕中至少一个以上由触摸板形成。

11. 一种利用具有多个屏幕的移动通信终端的菜单列表显示控制方法，
15 作为包含可同时查看的第1屏幕与第2屏幕的具有多个屏幕的移动通信终端的控制方法，其特征是包括如下几个步骤：

菜单列表显示步骤，在第1屏幕中显示菜单列表；

下级菜单列表显示步骤，根据所述的菜单列表显示步骤中光标的移动，
在所述的第2屏幕中显示相应项目的下级菜单列表。

20 12. 根据权利要求11所述的利用具有多个屏幕的移动通信终端的菜单列表显示控制方法，其特征是：

在所述的菜单列表显示步骤之前，还包括一个菜单导出步骤，命令在第1
屏幕中显示顶级菜单列表。

25 13. 根据权利要求11所述的利用具有多个屏幕的移动通信终端的菜单列表显示控制方法，其特征是：

还包括一个下级列表运行步骤: 移动所述的第 2 屏幕中显示的所述的下级菜单列表的光标, 选择所述的下级菜单列表的项目中的某一项, 直接运行所述的下级菜单列表的选择项目。

14. 根据权利要求 13 所述的利用具有多个屏幕的移动通信终端的菜单列表显示控制方法, 其特征是:

如果选择所述的下级菜单列表中的一个项目运行, 所述的第 1 屏幕中显示该项目的运行。

15. 根据权利要求 11 所述的利用具有多个屏幕的移动通信终端的菜单列表显示控制方法, 其特征是:

10 还包括一个光标位置选择步骤: 选择在所述的菜单列表与所述的下级菜单列表中的某一处显示所述的光标的位置。

16. 根据权利要求 15 所述的利用具有多个屏幕的移动通信终端的菜单列表显示控制方法, 其特征是:

15 所述的光标位置选择步骤是可以根据短按、长按所述的移动通信终端上形成的既定光标移动按钮, 选择所述的菜单列表或所述的下级菜单列表中的一个。

具有多个屏幕的移动通信终端及其菜单列表显示控制方法

技术领域

本发明涉及具有多个屏幕的移动通信终端及其菜单列表显示控制方法，
5 特别是涉及一种在第2屏幕中显示出在第1屏幕中显示的菜单列表的下级菜单列表，从而可以使用户更方便地了解菜单列表，更便利地使用多种功能的具有多个屏幕的移动通信终端及其菜单列表显示控制方法。

背景技术

一般而言，移动通信终端最初是用于无线语音通信的，不过，随着其功
10 能领域的日益多样化，移动通信终端除了语音通信功能外，已经具有了能够接收互联网、多媒体等影像服务的功能。

图1是以往移动通信终端的结构侧视图，如图所示，安装了相机的移动通信终端由机身部20和可以利用其上侧的合叶构件40打开/关闭的翻盖部30构成。

15 上述机身部20包括如下几个部分：机身部外壳23，包裹着用于进行移动通信终端的通信控制而形成的电路部；充电电池22，安装于机身部外壳23的背面，并可以取下；相机10，安装于机身部外壳23的前面上端部。

上述翻盖部20包括如下几个部分：翻盖部外壳32，包裹着显示多种信息的主屏幕(图中未标出)；辅助屏幕31，位于翻盖部外壳32的前面中央部，提
20 供基本的终端信息；声波传递孔33，形成于翻盖部外壳32的前面下端部，以便传递来自安装于翻盖部外壳32内部的扬声器的声波。

但是，如上构成的移动通信终端却存在如下局限，由于辅助屏幕31形成于终端翻盖30的前面，所以只能单纯地执行显示时间的功能或通知通话或接收文字消息的功能。即，以往，在主屏幕的有限空间内，用户要实现的主要
25 功能及其调节功能是通过另外的操作实现的，存在需要用户烦琐操作的问题。

另外，如要掌握要从菜单列表选择的项目的功能说明及其下级菜单列表，需要逐一进入选择的项目，这样比较麻烦。

发明内容

5 本发明正是为了解决上述以往技术的问题而提出的，其目的在于提供一种具有多个屏幕的移动通信终端及其菜单列表显示控制方法，在显示当前正在运行的作业的第1屏幕之外，包含一个可与第1屏幕同时查看的第2屏幕，在第2屏幕上显示上述第1屏幕中显示的菜单列表的相应项目的下级菜单列表，从而使用户无需另外的操作，便可以轻松获得关于第1屏幕中显示的菜单列表的下级菜单列表的信息。

10 本发明的另一目的是，通过在第2屏幕中显示的下级菜单列表中选择其一，便可以直接运行下级菜单列表中的某一作业，使用户可以方便地直接运行与下级菜单相应的作业，从而能够更方便地进行作业。

为实现上述目的，本发明提供的具有多个屏幕的移动通信终端包括如下几个部分：终端机身；终端翻盖，与上述终端机身重叠并可转动；第1屏幕，15 形成于上述终端翻盖上，可以显示菜单列表；第2屏幕，形成于上述终端机身上，可以显示上述菜单列表的光标位置所在的相应项目的下级菜单列表；而且可以同时查看上述第1屏幕与上述第2屏幕。

即，用户可以同时查看上述第1屏幕与上述第2屏幕，通过上述第2屏幕一同显示第1屏幕中运行的菜单列表的下级菜单列表，从而即使不逐一确认下级20 菜单列表，用户也可以了解下级菜单列表，增加使用的便利性。

同时，通过移动上述第2屏幕中显示的下级菜单列表的光标，选择下级菜单列表项目中的某一项，可以直接运行下级菜单列表的选择项目，从而可以节省用户检索菜单所需的努力和时间。

25 此时，上述第1屏幕与上述第2屏幕也可以由一个液晶屏幕构成，并将上述一个液晶屏幕划分为多个屏幕分别显示，构成上述第1屏幕与上述第2屏幕。而且，上述屏幕还可以由触摸板形成。

另一方面，在本发明的另一个领域，作为包含可同时查看的第1屏幕与第2屏幕的具有多个屏幕的移动通信终端的控制方法，提供一种利用具有多个屏幕的移动通信终端的菜单列表显示控制方法，其包括如下几个步骤：菜单列表显示步骤，在第1屏幕中显示菜单列表；下级菜单列表显示步骤，根据上述菜单列表显示步骤中光标的移动，在上述第2屏幕中显示相应项目的下级菜单列表。

本发明的效果在于，使用户无需另外的操作，便可以轻松获得关于正在运行的主菜单列表及其下级菜单列表的信息。

而且，在本发明中，通过移动在第2屏幕中显示的下级菜单列表的光标，在下级菜单列表中选择其一，便可以直接运行下级菜单列表的选择项目，从而可以节省用户检索菜单所需的努力和时间。

附图说明

图1是显示以往移动通信终端构成的斜视图；

图2是显示本发明可应用的移动通信终端构成的分解斜视图；

图3是显示图2所示的移动通信终端的屏幕由触摸板形成的构成斜视图；

图4是显示本发明可应用的另一移动通信终端构成的分解斜视图；

图5是本发明的显示顶级菜单画面的移动通信终端的正面图；

图6a及图6b是本发明实施例的具有多个屏幕的移动通信终端中显示菜单列表的第1屏幕与显示上述菜单列表的相应项目的下级列表的第2屏幕的略图。

附图主要部分的符号说明：

100: 移动通信终端 110: 终端机身

112: 键区 112a: 菜单按钮

116: 第2屏幕 117: 光标移动按钮

120: 终端翻盖 122: 第1屏幕

122a: 光标

具体实施方式

下面参照附图，就本发明的实施例进行详细说明。

图2及图3显示了本发明可应用的移动通信终端的构成。如图2及图3所示，本发明可应用的移动通信终端由如下几个部分构成：终端机身110，安装有用于控制通信等的电路部；终端翻盖120，与终端机身110重叠，被固定并可以转动，以图像显示各种信息。

上述终端机身110具有如下几个部分：机身外壳111，包裹着用于控制通信等的电路部；键区112，形成于机身外壳111的前面，可输入信息；送话部113，可把用户的语音传输给对方；电池114，安装于机身外壳111的背面，并可以取下；第2屏幕116，显示移动通信终端的多种作业或其列表等；倾斜凸起部115，用于安装第2屏幕116，并使用户可以以近似直角的舒适视角查看第2屏幕116。

上述终端翻盖120包括如下几个部分：第1屏幕122，形成于终端翻盖120的背面，以图像显示各种信息，在拍摄时，显示被摄体的像；翻盖外壳121，包裹着第1屏幕122；第1相机124，用于拍摄图像。

而且，上述第1屏幕122与第2屏幕116由触摸板方式的屏幕形成，通过用笔或手书写文字或绘制图形，也可以用作输入装置。

另一方面，图4是本发明可应用的另一移动通信终端构成的斜视图。如图4所示，在PDA等只具有一个屏幕320的移动通信终端300中，该屏幕320被划分为第1屏幕321与第2屏幕322两个区域，并可以在控制下分别进行显示，在这种情况下，也可以实现与前面所述的移动通信终端100相同的功能。

附图中未说明的符号312是在移动通信终端300中进行输入的键区。

下面，在具有可分别(2个以上)显示的第1屏幕(122, 321)与第2屏幕(116, 322)的移动通信终端(100, 300)中，以附图符号100所显示的移动通信终端为例，详细说明本发明的动作原理。

图5是本发明的显示顶级菜单画面的移动通信终端的正面图，当用户要利

用移动通信终端100进行作业时，按下菜单按钮112a后，如图5所示的顶级菜单显示于第1屏幕122。此时，用户可以通过操作键区112的方向键，使光标122a置于顶级菜单中的特定项目，光标122a所在的项目显示得比其它图标更大，以便能够轻松获知光标122a所在的项目。而且，在第2屏幕116中显示第1屏幕122的顶级菜单的光标122a所在相应项目的下级菜单，从而使用户可以轻松获知顶级菜单下的下级菜单列表。即，关于第1屏幕122上显示的发送消息项目的菜单列表显示于第2屏幕116上。

另一方面，在本发明的实施例中虽然是以图标显示顶级菜单画面的情形，但本发明的范围并非限于于此，也可以显示为文字列表。

10 在图5所示的顶级菜单画面中，如果选择了光标122a所在的发送消息项目，则转换为图6a所示的画面。即，在第1屏幕122中显示发送消息菜单列表，在第2屏幕116中自动显示第1屏幕122的菜单列表项目中光标122a所在的项目的下级菜单列表。

15 此时，如果短按终端机身110侧面形成的光标移动按钮117，则光标122a的控制权交给第2屏幕116。即，如果用户在短按光标移动按钮117后操作方向键，光标122a则第2屏幕116显示的下级菜单列表上移动。相反，当用户要重新控制其上级菜单列表上的项目时，长按光标移动按钮117后，光标122a的控制权重新交给第1屏幕122。

20 此时，不管是长按还是短按光标移动按钮117，在光标122a位于第1屏幕122中的状态下，如果按下光标移动按钮117，光标122a的控制权则交给第2屏幕116；在光标122a位于第2屏幕116中的状态下，如果再次按下移动按钮117，光标122a的控制权交给第1屏幕122。此时，光标移动按钮117也可以不同于附图所示，而是由键区112中的某一个按钮形成。

25 另一方面，在光标122a的控制权显示于第2屏幕116的状态下，如果选择下级菜单列表的一个项目，在该项目还有下级菜单的情况下，其下级菜单显示于第2屏幕116，选择的菜单列表显示于第1屏幕122。而且，如果在下级菜

单中选择的项目不再有下级菜单，则该选择的项目意味着运行命令，该相应项目直接运行。此时，如果选择第2屏幕116显示的下级菜单列表的一个项目运行，那么选择的项目在第1屏幕122中运行，第1屏幕122被激活。

例如，针对图6a的发送消息菜单，在第1屏幕122中显示选择消息种类的菜单列表，在第2屏幕116中显示第1屏幕122的光标122a所在的“1. Text Message(文字消息)”的下级菜单列表。即，用户无需另外的操作，便可以轻松确认在Text Message(文字消息)的下级菜单列表中有Write Message(制作消息)、Inbox(收件箱)、Outbox(已发件箱)、Draft(草稿箱)、Template(模板)。

10 此时，如果用户要把光标122a的控制权移交给第2屏幕116，则短按光标移动按钮117即可。这样一来，用户把光标移动到“1. Write message(制作消息)”项目后，按下选择按钮，如图6b所示，则立即在第1屏幕122中运行“制作消息”。同理，如果把光标移动到第2屏幕116中显示的下级菜单列表中的Inbox(收件箱)并选择，用户则可以不经过“Text Message(文字消息)”和“15 Inbox(收件箱)”的两步过程，直接运行Inbox(收件箱)。

如上述所作的说明，本发明的效果在于，本发明提供了一种具有多个屏幕的移动通信终端及其菜单列表显示控制方法，在显示当前正在运行的作业的第1屏幕之外，包含一个可与第1屏幕同时查看的第2屏幕，在第2屏幕上显示上述第1屏幕中显示的菜单列表的相应项目的下级菜单列表，从而使用户无需另外的操作，便可以轻松获得关于正在运行的主菜单列表及其下级菜单列表的信息。

而且，在本发明中，通过移动在第2屏幕中显示的下级菜单列表的光标，在下级菜单列表中选择其一，便可以直接运行下级菜单列表的选择项目，从而可以节省用户检索菜单所需的努力和时间。

25 以上具体实施方式仅用于说明本发明，而非用于限定本发明。

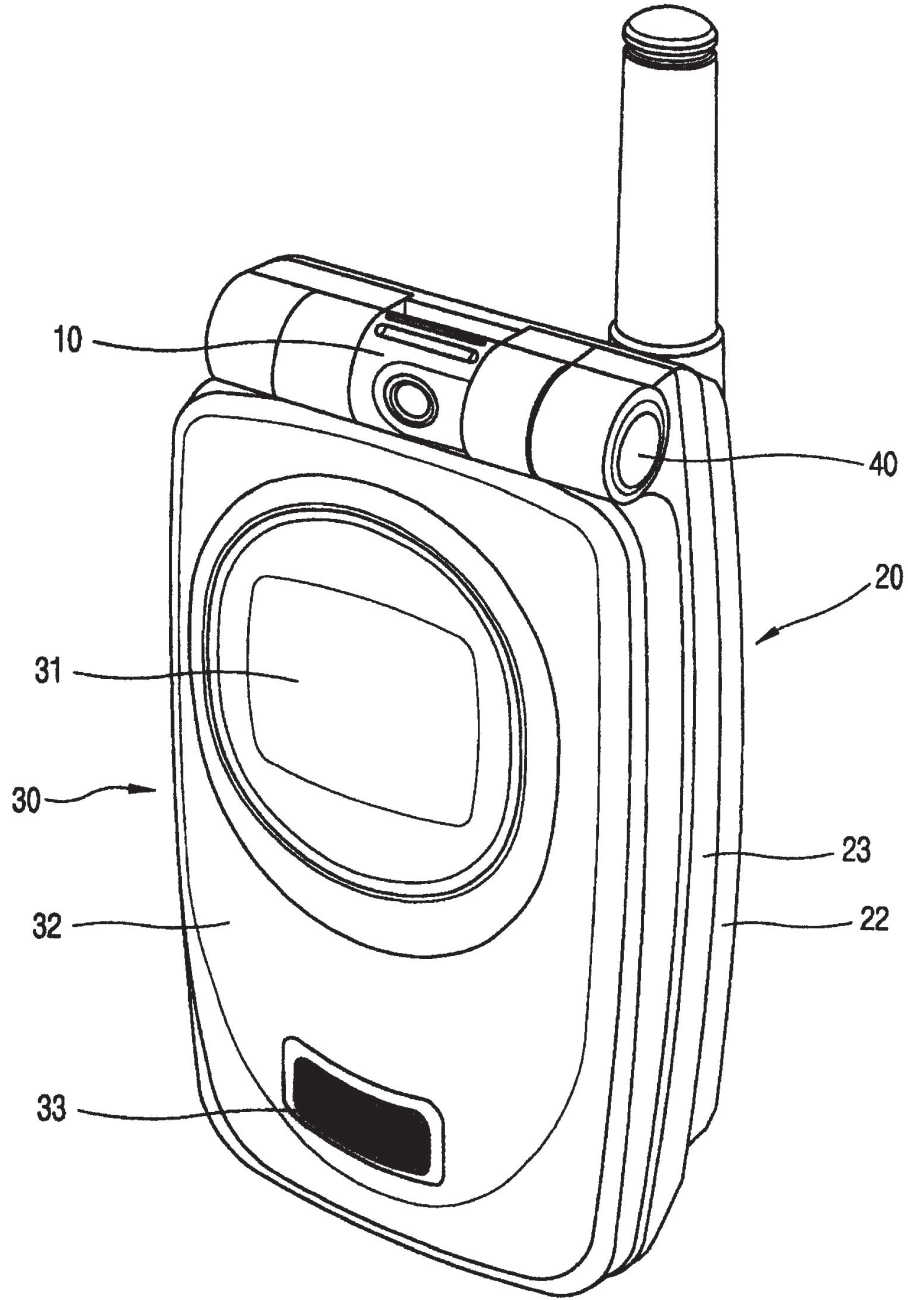


图 1

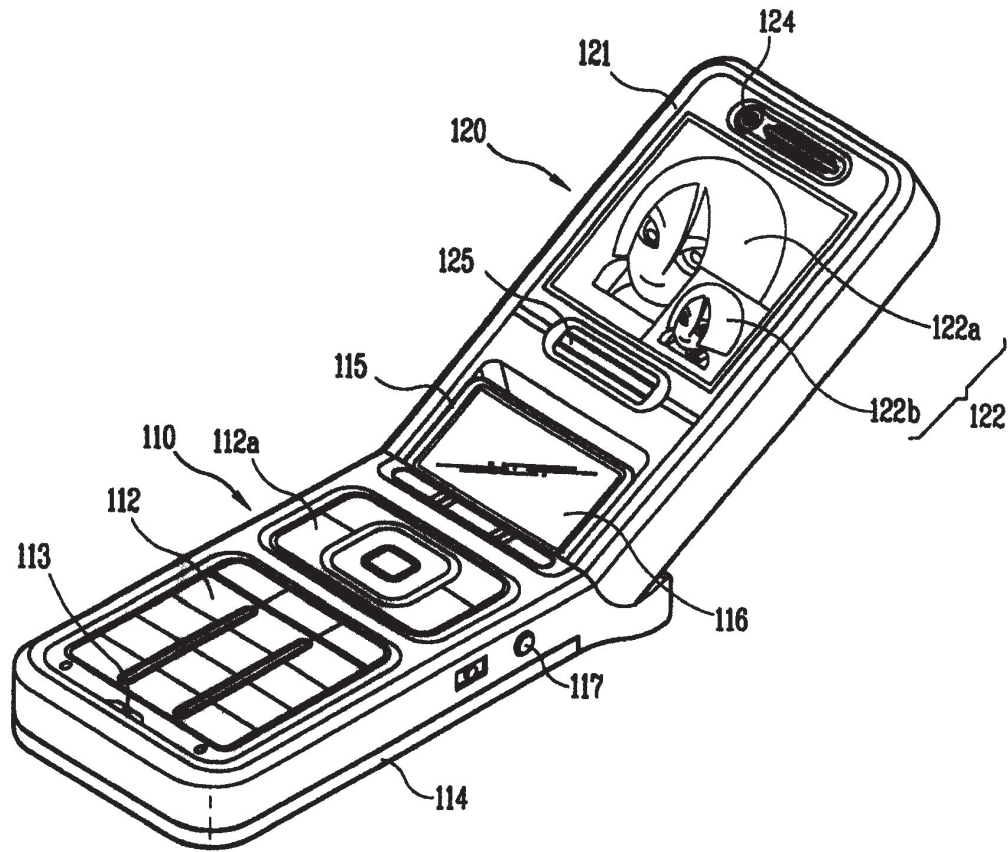


图 2

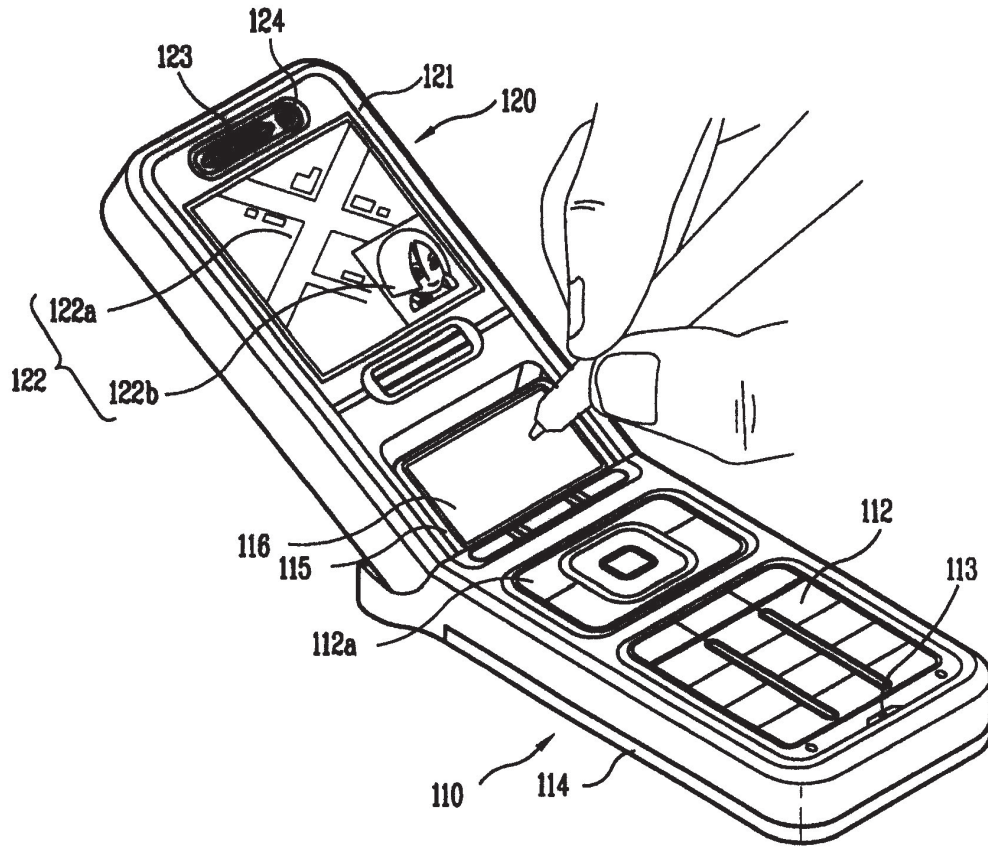


图 3

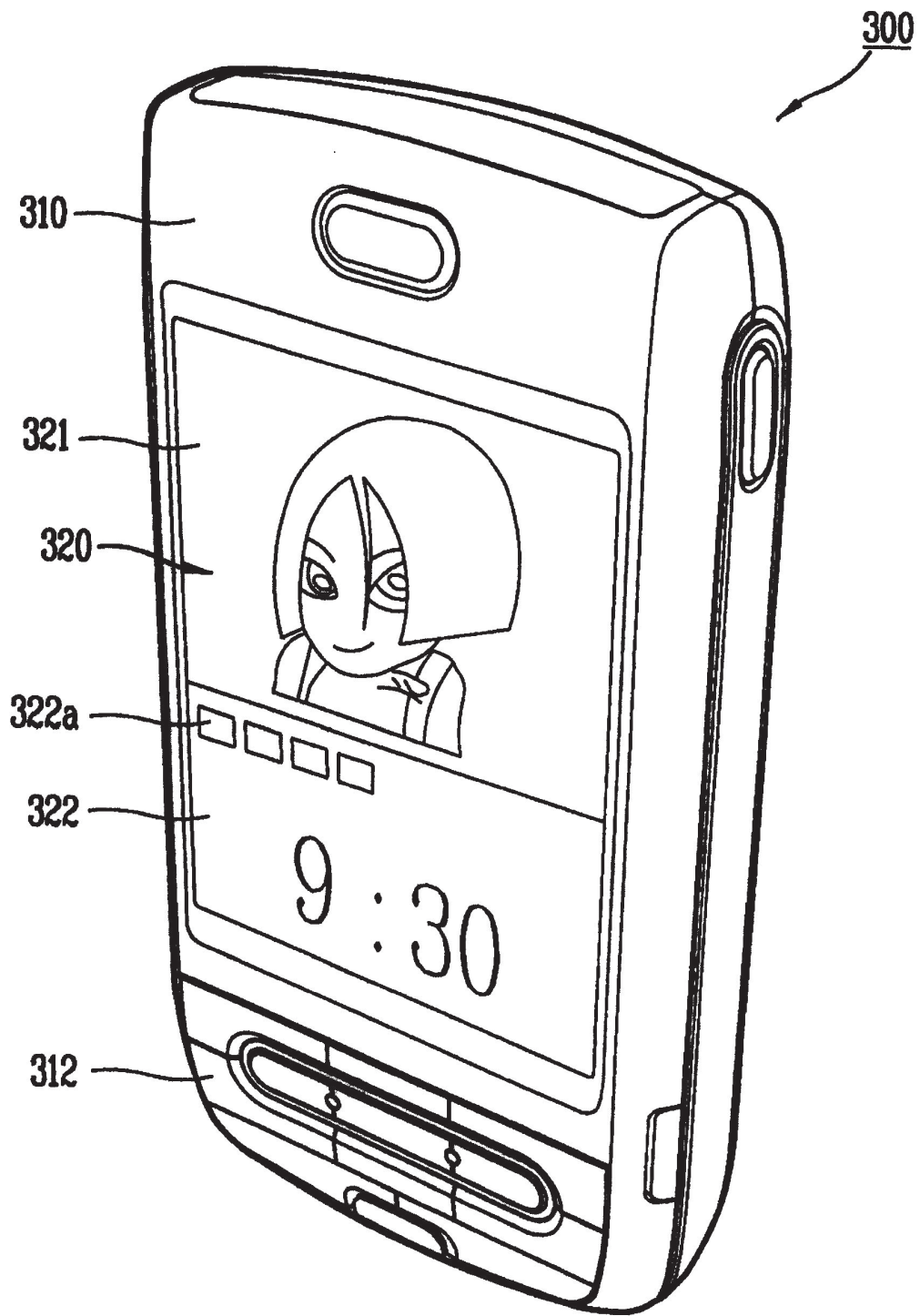


图 4

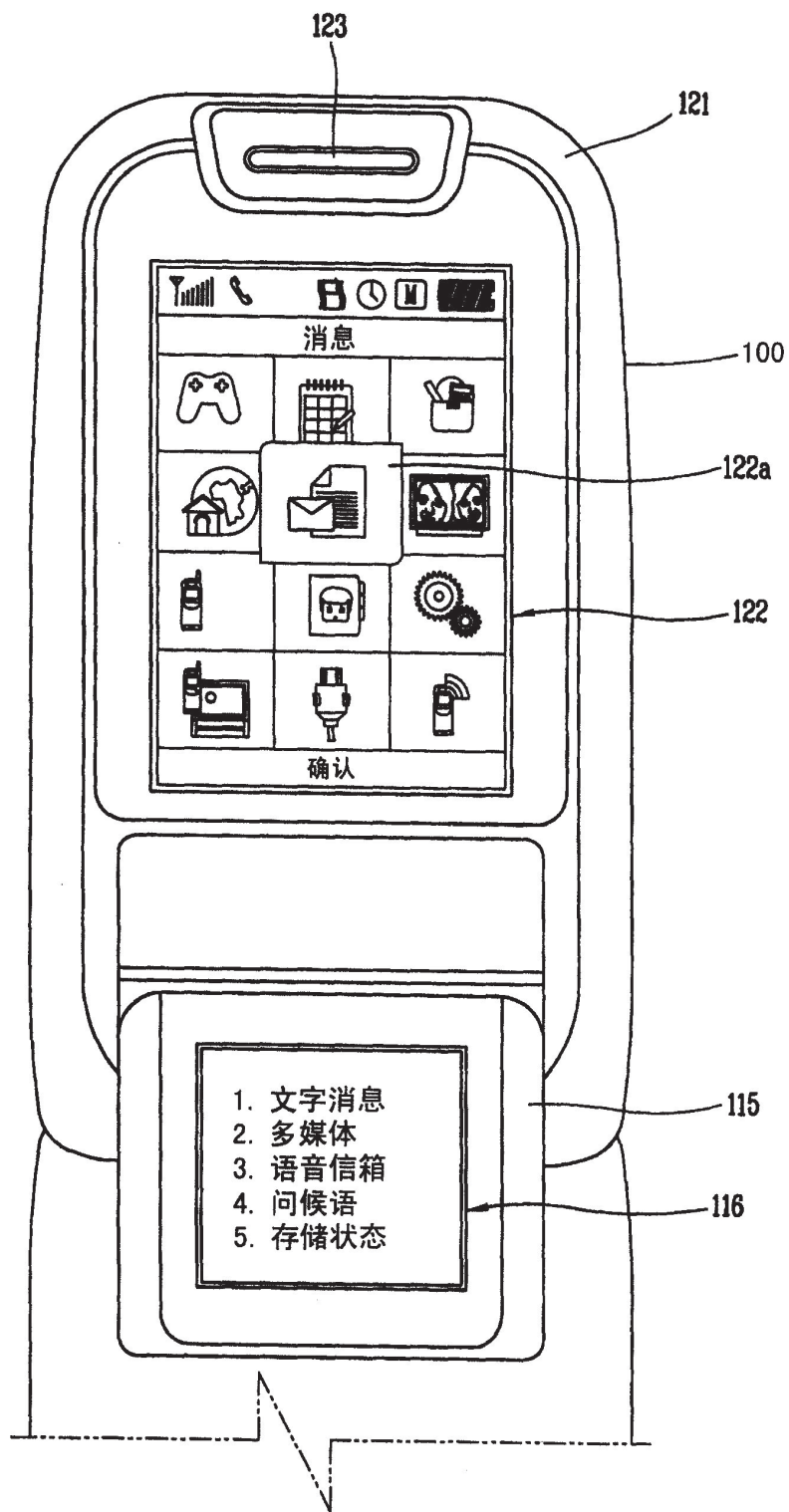


图 5

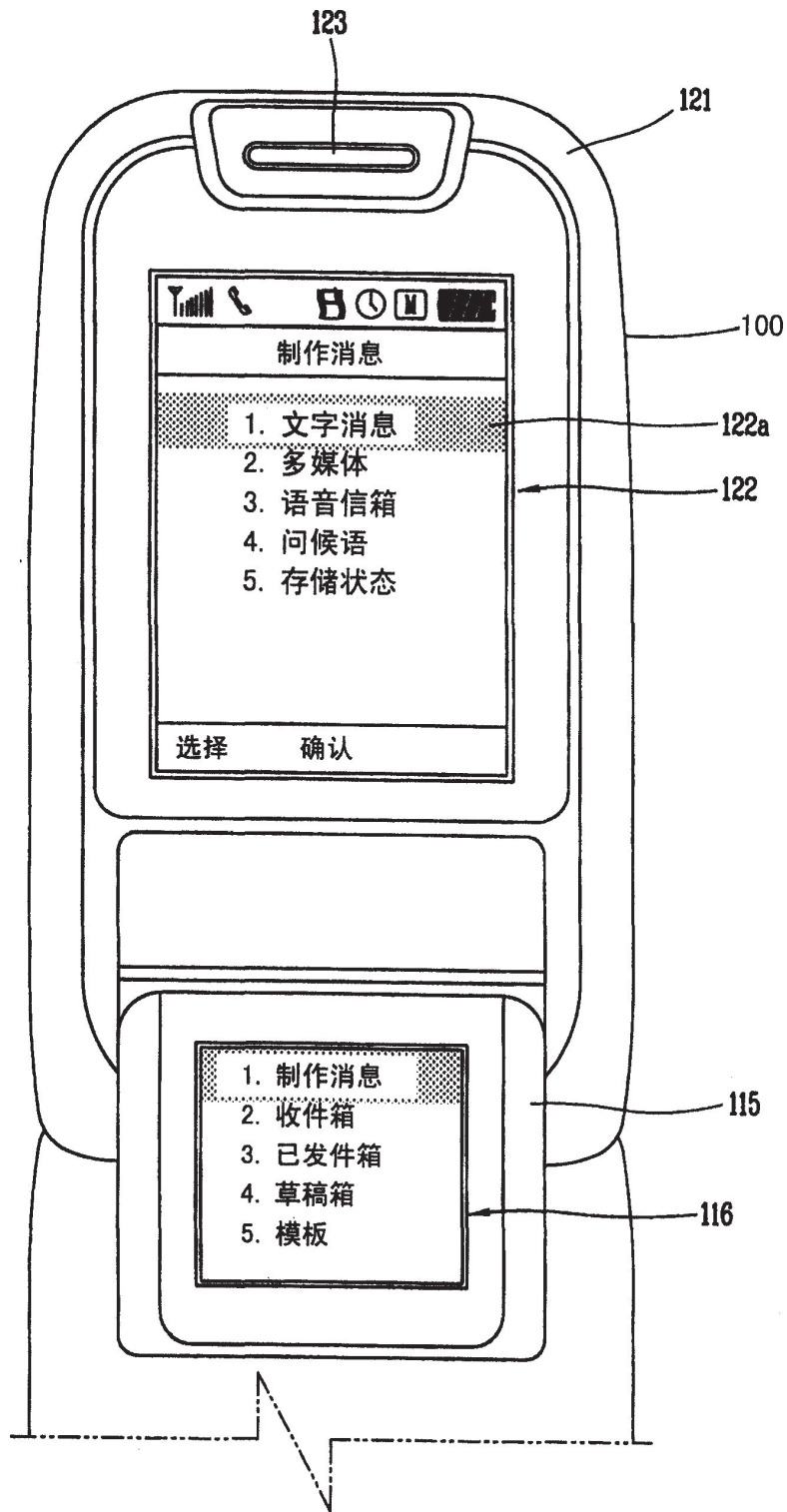


图 6a

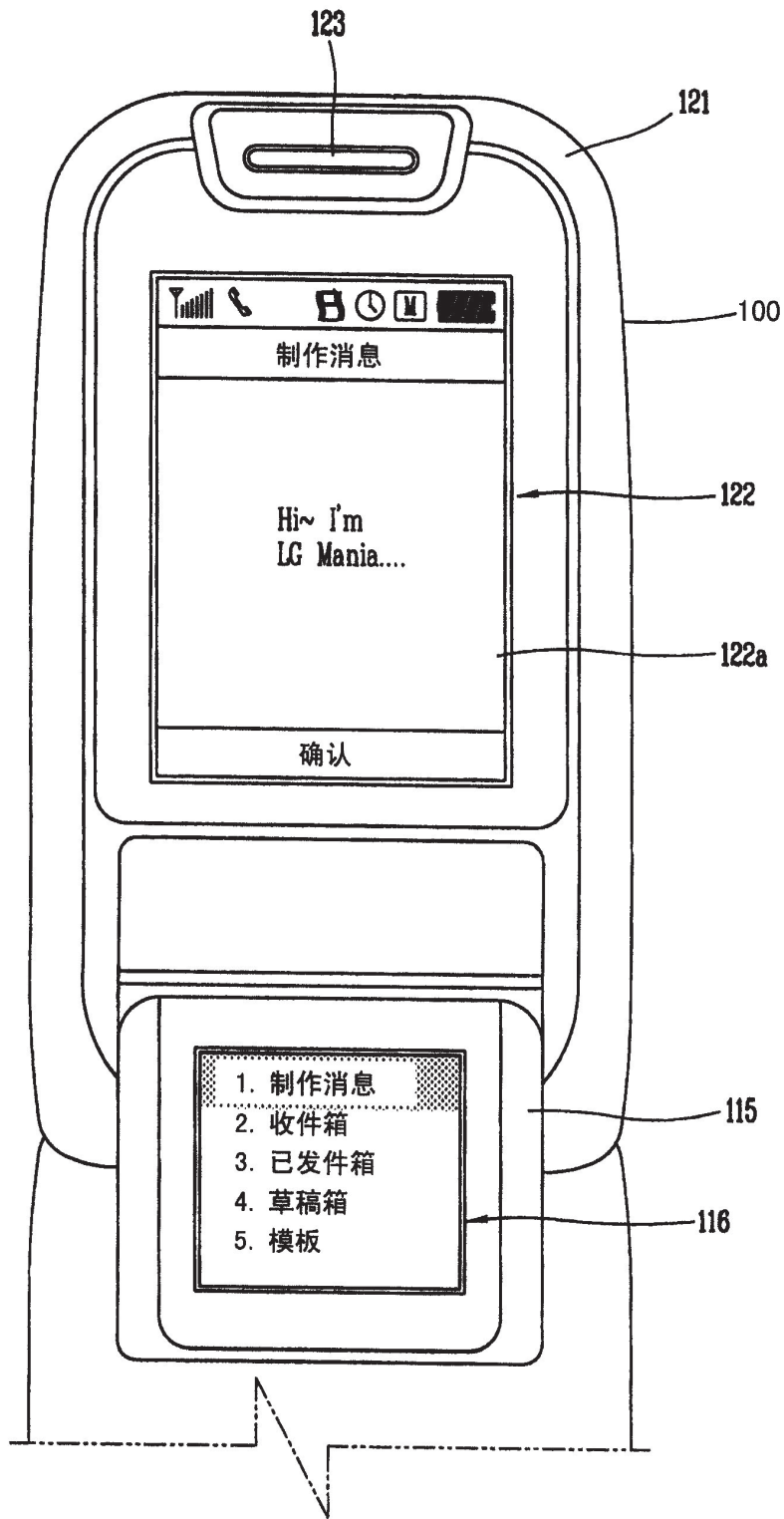
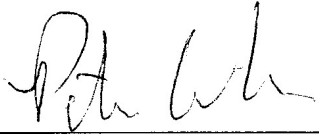


图 6b

I, Peter Erickson, declare as follows:

1. I am over 21 years of age and am competent to make this declaration.
2. I am a native speaker of English.
3. I am fluent in Chinese.
4. I have 20 years of experience translating Chinese to English.
5. I translated the attached document "CN1761267A" from Chinese to English.
6. I certify that the attached translation of the document "CN1761267A" is, to the best of my knowledge and ability, a true and accurate translation from Chinese to English.
7. In signing this declaration, I understand that the translation and this declaration may be filed as evidence in a contested case. I acknowledge that I may be subject to cross-examination within the United States.
8. I declare under penalty of perjury that all statements made herein of my own knowledge are true and that all statements made herein on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed: April 25, 2022

By: 
Peter Erickson