

APPARATUS AND METHOD FOR ISSUING A COUPON TICKET

Field of the Invention

The present invention relates to a technique for
5 issuing a coupon ticket at a terminal so-called
multimedia kiosk and the like, and more particularly,
it relates to a menu screen to be used for issuing the
coupon ticket.

Background of the Invention

10 There is a touch-panel type multimedia kiosk for
issuing a coupon ticket with which an incentive is
awarded at a store, and it is generally installed at
a station square, in a convenience store, a facility
which draws a crowd, and the like. Also there are
15 various coupon tickets available for issuing from the
multimedia kiosk. Then, the multimedia kiosk
provides a menu screen for selecting a coupon ticket
and a user utilizes the menu screen to select a desired
coupon ticket.

20 Here, since there are many cases that the menu
screen has a hierarchical structure, it is necessary
for the user to perform input operations following the
hierarchy, so as to reach a desired coupon ticket.
Therefore, it takes time until the coupon ticket
25 issuing is completed.

A feature of the present invention is to provide

a menu screen to issue a coupon ticket rapidly.

Summary of the Invention

A coupon ticket issuing apparatus comprising,
a first storing means which stores sales promotion
5 information of a plurality of stores,

a ticket issuing means which issues a coupon ticket
on which sales promotion information of one store out
of said plurality of stores is listed, and

a control means which displays on a display device
10 a menu screen including a menu hierarchically
structured for selecting one coupon ticket, and an
image used for directly selecting a particular coupon
ticket, wherein,

said ticket issuing means issues a coupon ticket
15 that is selected on said menu screen with reference
to said first storing means.

Accordingly, a particular coupon ticket can be
issued through just one-touch operation by a user.
Furthermore, since the menu hierarchically structured
20 is displayed, together with the image used for directly
selecting a particular coupon ticket, it is also
possible to select a coupon ticket following the
hierarchy in a conventional manner.

In a preferred embodiment, the first storing
25 means further comprises information indicating a
location of the store. The ticket issuing apparatus

further comprises a second storing means which stores the information indicating the location of the ticket issuing apparatus, and a particular coupon selecting means which determines the particular coupon ticket
5 based on the location of the ticket issuing apparatus and the location of the store. Subsequently, the ticket issuing means may issue the particular coupon ticket determined by the particular coupon selecting means. Accordingly, it is possible to issue a coupon
10 ticket for a store which is located close to the ticket issuing apparatus, through one-touch operation.

In a preferred embodiment, the ticket issuing means further comprises a third storing means which stores ticket issuing information indicating a past
15 ticket issuing performance by the ticket issuing means, wherein, the particular coupon selecting means may determine a particular coupon ticket based on the ticket issuing information, the location of the ticket issuing apparatus, and the location of the store.
20 Accordingly, it is possible to issue a coupon ticket which is frequently issued, through one-touch operation.

In a preferred embodiment, the particular coupon selecting means may determine the particular coupon
25 ticket based on a ticket issuing time, the location of the ticket issuing apparatus and the location of

the store. Then, it is possible to issue a suitable coupon ticket responsive to the ticket issuing time.

In a preferred embodiment, the present invention further comprises an identification information
5 obtaining means which obtains identification information of a user who utilizes the ticket issuing apparatus, wherein, the ticket issuing information storing means stores by user the ticket issuing information in such a manner as associated with the
10 user identification information, and the particular coupon selecting means may determine the particular coupon ticket based on the user identification information obtained by the identification information obtaining means, ticket issuing
15 information associated with the user identification information, the location of the ticket issuing apparatus and the location of the store. Accordingly, it is possible for each user to issue a coupon ticket which is frequently issued by oneself through
20 one-touch operation.

Brief Description of Drawings

Fig. 1 is a diagram showing an overall configuration of one embodiment to which the present invention is applied.

25 Figs. 2A and 2B are diagrams showing an example of table structures constituting a coupon information

database.

Figs. 3A and 3B are diagrams showing an example of table structures constituting a ticket issuing database.

5 Fig. 4 is a diagram showing an example of a table structure constituting a user database.

Figs. 5A and 5B are diagrams showing an example of screens to be displayed on a display device.

10 Fig. 6 is a flowchart showing a first process to select a direct menu.

Fig. 7 is a flowchart showing a second process to select the direct menu.

Fig. 8 is a flowchart showing a third process to select the direct menu.

15 Fig. 9 is a flowchart showing a fourth process to select the direct menu.

Fig. 10 is a flowchart showing a fifth process to select the direct menu.

Detailed Description of the Preferred Embodiments

20 Hereinafter, a terminal device 1 having a function to print a coupon ticket, concerning one embodiment to which the present invention is applied will be explained with reference to the attached drawings. It is preferable to use this terminal
25 device 1 as an information processing terminal for business purposes, such as so-called multimedia kiosk.

As shown in Fig. 1, the terminal device 1 comprises, for example, an input device 2, a display device 3, a printer 4, a card reader 5 and an information processing unit 10.

5 For example, the input device 2 and the display device 3 may be implemented, by use of a touch panel and an LCD (Liquid Crystal Display) installed on the backside thereof. The printer 4 prints and outputs a coupon ticket as described below. The card
10 reader 5 is a device for reading information recorded on a magnetic card, an IC (integrated circuit) card or the like. In the present embodiment, for example, the card reader 5 reads out a user ID (identification) from an IC card and the like, on which the user ID and
15 the like are recorded. The IC card and the card reader 5 may be any one of contact type and contactless type.

 The information processing unit 10 may be configured, for example, by computer systems of general purpose. Individual elements or features
20 within the information processing unit 10, which will be described below, are implemented by executing a computer program, for instance.

 The information processing unit 10 comprises a display control section 11, a ticket issuing
25 processing section 12, an authentication processing section 13, a map database 14, a location information

storing section 15, a clock section 16, a coupon information database 20, a ticket issuing database 30, and a user database 40.

The coupon information database 20 comprises a coupon table 21 and a store table 22. In the coupon table 21, there are stored by store, sales promotion information regarding a plurality of stores. Contents included in the sales promotion information can be printed, for example, on a coupon ticket. As shown in Fig. 2A, for example, the coupon table 21 includes as data items, a coupon code 211 indicating a type of coupon ticket, a store code 212, incentive information 213 for sales promotion, number of issued ticket sheets 214, a maximum number of ticket issuing 215, and a sales promotion flag 216 indicating that the sales promotion activity as to the coupon is especially enhanced.

The incentive information 213 is information such as bonus, which a customer having brought a coupon ticket to a store can enjoy at the store, and this incentive information is intended to motivate the customer to take a certain purchasing action. Specific contents of the incentive information 213 (for example, what merchandise or service is a target for the incentive, how much is the discount rate, and the like) may be determined uniquely in each store. The incentive information 213 and the sales promotion

flag 216 may be updatable. For example, the incentive information 213 and the sales promotion flag 216 of one's own store may be updated by getting access thereto, for example, from a mobile phone possessed
5 by a store manager (not illustrated) or the like.

The number of issued ticket sheets 214 is a number of coupon ticket sheets having already been issued. The maximum number of ticket issuing 215 is an upper limit number of coupon ticket sheets that the terminal
10 device 1 is capable of issuing. Therefore, a difference between the maximum number of ticket issuing 215 and the number of issued ticket sheets 214 indicates a number of ticket sheets available for issuing at the point of time.

15 In the store table 22, there is stored information regarding a target store for which the terminal device 1 issues a coupon ticket. For example, as shown in Fig. 2B, the store table 22 includes as data items, a store code 221, a store name 222, a store address 223, a store
20 telephone number 224, and a store category 225. The store category 225 represents categories of store, and it includes, for example, a pub, a fast-food restaurant, an entertainment facility, and the like.

The ticket issuing database 30 comprises a ticket
25 issuing history table 31 and an accumulation table 32. In the ticket issuing history table 31, there is stored

a ticket issuing history of a coupon ticket issued by the terminal device 1. For example, as shown in Fig. 3A, the ticket issuing history table 31 includes as data items, a ticket issuing number 311, a coupon code 312, a ticket issuing date and time 313, and a user ID 314. One record is added to the ticket issuing history table 31 every time when a ticket is issued by the ticket issuing processing section 12.

In the accumulation table 32, there is stored an accumulation result obtained by accumulating during a predetermined period of time, the ticket issuing history that is stored in the ticket issuing history table 31. For example, in the accumulation table 32, there is stored data which is obtained by accumulating the number of ticket sheets issued during the predetermined period of time, per a predefined accumulation unit. This accumulation processing is performed, for example, by an accumulation processing section, which is not illustrated. As shown in Fig. 3B, the accumulation table 32 includes as data items, a coupon code 321, a ticket issuing time frame 322, a user ID 323, and a number of issued ticket sheets 324. In other words, in this example, the number of ticket sheets is accumulated by time frame when the ticket was issued and by user who conducted the ticket issuing. The ticket issuing time frame 322 may be a

ticket issuing time frame within one day (for example, from 10:00 AM to 11:00 AM). Alternatively, a day of the week or a month may be considered as a unit for the time frame.

5 In the location information storing section 15, there is stored information indicating a location where the terminal device 1 is installed. The information indicating the location may be, for example, an address and the like where the terminal
10 device 1 is installed.

There is stored map information in the map database 14. The map information is used to obtain a distance (a way to go) from a place where the terminal device 1 is installed to a store.

15 A user table 41 is stored in the user database 40. In the user table 41, there is stored attribute information and the like regarding a user who is registered. For example, as shown in Fig. 4, the user table 41 includes as data items, a user ID 411 that
20 is user identification information, a password 412, and a keyword 413 that indicates what kind of things the user is interested in.

The authentication processing section 13 performs user authentication. For example, when the
25 card reader 5 reads out a user ID from a predefined membership card, and the authentication processing

section 13 receives an input of password from the input device 2, the authentication processing section 13 performs authentication process to determine whether or not the user is valid as a registered user.

5 The ticket issuing processing section 12 performs processing to allow the printer 4 to print out a coupon ticket and to issue the coupon ticket. For example, when the ticket issuing processing section 12 is notified of the coupon code from the display control
10 section 11, the ticket issuing processing section 12 obtains from the coupon table 21, incentive information 213 corresponding to the coupon code, allows a printer 4 to print out and issue the coupon ticket. Furthermore, the ticket issuing section 12
15 adds to the ticket issuing history table 31, ticket issuing data regarding the coupon ticket thus issued.

 The display control section 11 displays a menu screen and the like on the display device 3. For example, as shown in Fig. 5A, a menu screen 100 for
20 selecting a coupon ticket is displayed on the display device 3 by the display control section 11. The menu screen 100 includes a hierarchy area 110 for displaying a hierarchical menu, and a direct area 120 for displaying a direct menu.

25 In the hierarchical menu, a menu for selecting a coupon ticket is hierarchically structured. In Fig.

5A, menu buttons 111, 112 and 113, respectively representing three categories (a fast-food restaurant, an entertainment facility, and a pub) are displayed as an example of the hierarchical menu. When any one of the buttons 111, 112 and 113 is selected, the display control section 11 changes the screen to a selection screen on which a coupon ticket belonging to thus selected category can be selected. For example, if the button 111 representing the fast-food restaurant is selected here, the display control section 111 obtains the store names 222 having a corresponding store category 225 (i.e., the store category is "fast-food restaurant"), and displays on the display device 3 a selection screen 200 for selecting a coupon ticket for the fast-food restaurants, as shown in Fig. 5B. On the selection screen 200, at least one selection button 210 representing the fast-food restaurant, or a coupon ticket that the fast-food restaurant is offering, is displayed. Here, when any one of the selection buttons 210 is selected, the ticket issuing processing section 12 is notified of the coupon code 211 corresponding to the button 210 thus selected, and a coupon ticket of the selected store is issued.

25 In the example as shown in Fig. 5A, a button 121 for selecting "coupon A" and a button 122 for selecting

"coupon B" are displayed. When the button 121 is selected, the ticket issuing processing section 12 is notified of the coupon code 211 of the coupon ticket A, and the coupon ticket A is issued from the printer 4. Similarly, when the button 122 is selected, the coupon ticket B is issued from the printer 4. It is to be noted that two types of coupon tickets are selectable as a direct menu in this case, but the number of types may be one or multiple.

When the direct menu is used, a user at the terminal device can directly select a particular coupon ticket. In other words, the user can obtain the coupon ticket through just one input operation. The direct menu is different from the hierarchical menu in the point that a coupon ticket is issued through only one step, since the hierarchical menu requires a plurality of input operations following the hierarchy.

Here, the display control section 11 performs a selection which coupon ticket will be displayed on the direct menu. Such selection process will be explained with reference to the flowcharts as shown in Fig. 6 to Fig. 10.

In the first selection process as shown in Fig. 6, firstly, the display control section 11 obtains the accumulation table 32 from the ticket issuing database.

30 (S11). Then, a predetermined number of coupon tickets are extracted, which are ranked in the topside with regard to the number of issued ticket sheets by coupon code (for example, five coupon tickets in the
5 topside) (S12). The display control section 11 obtains from the store table 22 of the coupon information database 20, information regarding stores that offer thus extracted coupon tickets. Further, the display control section 11 obtains from the
10 location information storing section 15, location information of the terminal device 1 (S13). The display control section 11 obtains a distance from the terminal device 1 to each store, by use of the map information, the location information and the store
15 address of the map database 14 (S14). Then, the coupon tickets for two stores having the shortest distance out of thus obtained results are selected as recommended coupons (S15).

Here, regardless of the distance between the
20 terminal device 1 and the store, two coupon tickets being ranked in the topside as to the number of issued ticket sheets may be selected as recommended coupons.

Next, in the second selection process as shown in Fig. 7, the display control section 11 obtains the
25 current date and time from the clock section 16 (S21). Further, the display control section 11 obtains the

accumulation table 32 from the ticket issuing database
30 (S22). Then, coupon tickets are extracted, the
issued number of which by coupon code is ranked in
topside during the ticket issuing time frame 322
5 corresponding to the current data and time (S23, S24).
Accordingly, it is possible to offer coupon tickets
on the direct menu, which are frequently issued in each
time frame, for example, lunch time, evening time,
night time and the like.

10 The ticket issuing time frame may be set by
day-of-week or by season, ranking as to the frequently
issued coupon ticket is obtained by day-of-week or by
season, and the coupon tickets ranked in the topside
may be set as recommended coupons. Accordingly, on
15 the weekend or in the latter half of week, it is
possible to offer as the direct menu, a coupon ticket
for use in the entertainment facility that is in high
demand on the weekend. Moreover, similar to the
example of Fig. 6, it is further possible to select
20 a coupon ticket for use in a store that is located at
a place close to the terminal device 1, out of the
coupon tickets that are ranked in the topside as to
the number of issued ticket sheets.

Next, a third selection process as shown in Fig.
25 8 will be explained. When a user who uses the terminal
device 1 allows the card reader 5 to read his or her

user ID, the display control section 11 obtains this user ID (S31). The display control section 11 obtains user attribute information from the user table 41 of the user database 40, based on thus obtained user ID
5 (S32). Here, a keyword 413 included in the attribute information is extracted (S33). Based on thus extracted keyword, a coupon table is searched and a coupon ticket relating to the keyword is extracted (S34).

10 Then, it is possible to offer as the direct menu a coupon ticket suitable for each user's taste. Here, similar to the example of Fig. 6, it is also possible to select a coupon ticket for use in the store close to the terminal device 1, out of the coupon tickets
15 relating to the keyword.

Next, a fourth selection process as shown in Fig. 9 will be explained. Similar to the third process, the display control section 11 obtains the user ID (S41). Then, the display control section 11 uses the
20 obtained user ID as a key, extracts a record the user ID of which matches the obtained user ID, from the accumulation table 32 of the ticket issuing database 30, and obtains the number of issued ticket sheets 324 (S42). Then, two coupon codes 321 whose number of
25 issued ticket sheets by coupon code are ranked in the topside are extracted (S43), and thus extracted coupon

tickets are set as recommended coupons (S44).

Accordingly, it is possible to offer each user a coupon ticket that is frequently used by each user, as the direct menu. Here, similar to the example of
5 Fig. 6, it is possible to select a coupon ticket for use in a store that is located at a place close to the terminal device 1, out of the coupon tickets that are ranked in the topside as to the number of issued ticket sheets.

10 Next, a fifth selection process will be explained as shown in Fig. 10. Firstly, the display control section 11 obtains a coupon table 21 from the coupon information database 20 (S51). Then, a coupon code 211 is extracted, whose sales promotion flag 216 is set
15 to "ON" in the coupon table 21, indicating that the sales promotion activity as to the coupon ticket is to be enhanced (S52). Then, the coupon ticket thus extracted is set as a recommended coupon (S53).
Accordingly, it is possible to set by priority the
20 coupon ticket as a recommended coupon, as to which the sales promotion activity is required to be enhanced in each store.

Here, similar to the example of Fig. 6, it is possible to select a coupon ticket for use in a store
25 that is located at a place close to the terminal device 1, out of the coupon tickets as to which the sales

promotion activity is to be enhanced. Further, the fifth selection process may be combined with any one of the aforementioned first to the fourth selection processes.

- 5 It is to be noted that in any of the aforementioned selection processes, it may be possible to eliminate the coupon ticket, whose remaining number of ticket sheets available for issuing is zero.

 The embodiments of the present invention as
10 described above are examples for a purpose of explanation, and it is not intended that the present invention is limited only to the scope of those embodiments. Therefore, it is to be understood that various changes and modifications will be apparent to
15 those skilled in the art to carry out the present invention without departing from the scope of the present invention.

WHAT IS CLAIMED IS:

1 1. A coupon ticket issuing apparatus comprising,
2 a first storing means which stores sales promotion
3 information of a plurality of stores,
4 a ticket issuing means which issues a coupon ticket
5 on which sales promotion information of one store out
6 of said plurality of stores is listed, and
7 a control means which displays on a display device
8 a menu screen including a menu hierarchically
9 structured for selecting one coupon ticket, and an
10 image used for directly selecting a particular coupon
11 ticket, wherein,
12 said ticket issuing means issues a coupon ticket
13 that is selected on said menu screen with reference
14 to said first storing means.

1 2. A coupon ticket issuing apparatus according to
2 claim 1, wherein,
3 said first storing means further includes
4 information indicating a location of a plurality of
5 said stores, and
6 said ticket issuing apparatus further comprises,
7 a second storing means which stores information
8 indicating a location of said ticket issuing apparatus,

9 and
10 a particular coupon selecting means which
11 determines said particular coupon ticket based on the
12 location of said ticket issuing apparatus and the
13 location of a plurality of said stores, wherein,
14 said ticket issuing means issues said particular
15 coupon ticket determined by said particular coupon
16 selecting means.

1 3. A coupon ticket issuing apparatus according to claim
2 2, further comprising,
3 a third storing means which stores ticket issuing
4 information indicating a past ticket issuing
5 performance by said ticket issuing means, wherein,
6 said particular coupon selecting means
7 determines said particular coupon ticket, based on
8 said ticket issuing information, the location of said
9 ticket issuing apparatus, and the location of a
10 plurality of said stores.

1 4. A coupon ticket issuing apparatus according to claim
2 2, wherein,
3 said particular coupon selecting means
4 determines said particular coupon ticket, based on a
5 ticket issuing time, the location of the ticket issuing

6 apparatus and the location of a plurality of said
7 stores.

1 5. A coupon ticket issuing apparatus according to claim
2 3, further comprising,

3 an identification information obtaining means
4 which obtains user identification information of a
5 user who utilizes said ticket issuing apparatus,
6 wherein,

7 said third storing means stores said ticket
8 issuing information by user, in such a manner as
9 associated with said user identification information,
10 and

11 said particular coupon selecting means
12 determines said particular coupon ticket, based on
13 said user identification information obtained by said
14 identification information obtaining means, the
15 ticket issuing information associated with said user
16 identification information, the location of said
17 ticket issuing apparatus and the location of a
18 plurality of said stores.

1 6. A coupon ticket issuing method comprising the
2 steps of:

3 displaying on a display device a menu screen

4 including a menu hierarchically structured for
5 selecting one coupon ticket, and a receiving image for
6 directly selecting a particular coupon ticket,
7 receiving a plurality of inputs following said
8 menu hierarchically structured, and when one coupon
9 ticket is selected, issuing the coupon ticket thus
10 selected, and
11 when an input to said receiving image is accepted,
12 directly issuing a coupon ticket associated with the
13 receiving image.

1 7. A computer program which executes a coupon ticket
2 issuing process, comprising the steps of:
3 displaying on a display device a menu screen
4 including a menu hierarchically structured for
5 selecting one coupon ticket, and a receiving image for
6 directly selecting a particular coupon ticket,
7 receiving a plurality of inputs following said
8 menu hierarchically structured, and when one coupon
9 ticket is selected, issuing the coupon ticket thus
10 selected, and
11 when an input to said receiving image is accepted,
12 directly issuing a coupon ticket associated with the
13 receiving image.