

customer are placed, which causes a problem of complexity to the customer in finding preferred products.

In order to solve the above-mentioned problem of the prior art, an object of the present invention is to provide a product display rack system that guides other products relating to a product taken by the customer in the hand to the customer so as to promote the sales, as well as a product display rack method and a product display rack program for such a system.

MEANS FOR SOLVING THE PROBLEMS

In order to achieve the above-mentioned object, a product display rack system in accordance with a first aspect of the present invention, which displays a plurality of products having a plurality of product types and functional types, each having an RFID tag having a radio communication function for an RFID number attached thereto, and related products in association with a product taken by a customer in the hand are guided to the customer, and the system includes:

a plurality of product display racks on which the plurality of products with the RFID tags attached thereto are displayed; a plurality of RFID readers for detecting the RFID numbers from the RFID tags of the products displayed on the product display racks; a lamp guiding unit for guiding the customer to the position of the product displayed on each of the plurality of product display racks by a lighted lamp or a flickering lamp; a product related information data base in which relations among the product types and functional types of the plurality of products are stored; a product coordinate data base in which product display coordinates for the product display rack for each of the product types are stored; and control means which based upon the results of detection by the RFID reader, guides other products related to the product taken by the customer in the hand, and in this system,

the control means ~~carries out~~ is configured to: a ~~first step~~

~~for detecting~~ an RFID number of a product taken by a customer from a desired display rack based upon the detection result of the RFID reader; ~~a second step for acquiring~~ acquire RFID numbers of related products having related product types and functional types relative to the product type of the RFID number from the product related information data base by using the detected RFID number ~~detected in the first step~~ as a key; ~~a third step for acquiring~~ acquire the product display coordinates of the product type from the product coordinate data base by using the acquired RFID number of the related product ~~acquired in the second step~~ as a key; and ~~a fourth step for~~ effect lighting or flickering the lamp of the lamp guiding unit at a position close to the acquired product display coordinates ~~acquired in the third step~~.

Moreover, in accordance with a second aspect of the present invention, the product display rack system according to the first aspect is provided with: an image display unit for displaying an image; and an image data base for storing a commercial image for a product corresponding to a RFID number, and the control means ~~carries out a fifth step for~~ is further configured to retrieving ~~retrieve~~ the commercial image for the product related to the RFID number from the image data base by using the detected RFID number ~~detected in the first step~~ as a key so as to display the corresponding image on the image display unit.

Moreover, in accordance with a third aspect, the product display rack system according to the first or second aspect of the present invention is characterized in that, when, ~~in the second step,~~ the control means determines that a customer has taken a plurality of products in the hand within a predetermined period of time, the control means is further configured to determine ~~carries out a sixth step in which~~ the functional types and series of the plurality of products taken by the customer in the hand ~~are determined~~, and upon determination that products of the same functional type have been

taken in the hand, acquire other products having the same functional type ~~are acquired~~ as the related products, while upon determination that products of the same series have been taken in the hand, acquire other functional-type products in the same series ~~are acquired~~ so that a commercial message sentence relating to each of the related products corresponding to the RFID numbers of the acquired related products is displayed on the image display unit.

Furthermore, in accordance with a fourth aspect, in the product display rack system according to the first or second aspect, the control means ~~carries out a seventh step~~ is further configured to determine whether or not the product that has been taken by the customer in the hand has been returned to the product display rack by using the RFID reader in which when a predetermined period of time has elapsed from the start of the lighting or flickering of the lamp ~~in the fourth step, a determination is made as to whether or not the product that has been taken by the customer in the hand has been returned to the product display rack by using the RFID reader,~~ and upon determination that the product has been returned, read the RFID numbers and product display coordinates ~~are read from the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.~~

Furthermore, in accordance with a fifth aspect, in the product display rack system according to the third aspect in the present invention, the control means ~~carries out a seventh step in which~~ is further configured to determine whether or not the products taken by the customer in the hand have been returned to the product display rack by using the RFID reader when a predetermined period of time has elapsed from the start of the lighting or flickering of the lamp ~~in the fourth step, a determination is made as to whether or not the product taken by the customer in the hand has been returned to the product display rack by using the RFID reader,~~ and upon

determination that the products ~~has~~ have been returned, read the
RFID numbers and product display coordinates ~~are read~~ from the RFID
tags of all the products displayed on the plurality of the product
5 display racks so that the product display coordinates for each of
the product types are stored in the product coordinate data base.

Furthermore, in accordance with a sixth aspect of the present
invention, in the product display rack system according to the third

aspect, the control means ~~carries out a step in which~~ is further configured to, upon determination that the products taken by the customer in the hand ~~in the sixth step has~~ have not been returned to the product display rack, stop the lighting or flickering of the lamp in the lamp guiding unit ~~in the fourth step~~ and the image display by the image display unit ~~are stopped~~.

Moreover, in accordance with a seventh aspect, a product display rack method for a computer system which can guide other products related to the product taken by the customer in the hand, and the system includes: a plurality of product display racks on which a plurality of products having a plurality of product types and functional types, each having an RFID tag having a radio communication function for an RFID number attached thereto, are displayed; a plurality of RFID readers for detecting the RFID numbers from the RFID tags of the products displayed on the product display racks; a lamp guiding unit for guiding the customer to the position of the product displayed on each of the plurality of product display racks by a lighted lamp or a flickering lamp; a product related information data base in which relations among the product types and functional types of the plurality of products are stored; a product coordinate data base in which product display coordinates for the product display rack for each of the product types are stored; and control means which based upon the results of detection by the RFID reader,

the control means ~~carries out: a first step for~~ is configured to detect ~~detecting~~ an RFID number of a product taken by a customer from a desired display rack based upon the detection result of the RFID reader; ~~a second step for acquiring~~ acquire RFID numbers of related products having related product types and functional types relative to the product type of the RFID number from the product related information data base by using the detected RFID number ~~detected in the first step~~ as a key; ~~a third step for acquiring~~ acquire

the product display coordinates of the product type from the product coordinate data base by using the acquired RFID number of the related product ~~acquired in the second step~~ as a key; and a ~~fourth step~~ ~~for~~ effect lighting or flickering the lamp of the lamp guiding unit at a position close to the product display coordinates ~~acquired in the third step~~.

In accordance with a eighth aspect, in the product display rack method according to the seventh aspect, the computer system further includes: an image display unit for displaying an image; and an image data base for storing a commercial image of a product corresponding to the RFID number, and the control means ~~carries out a fifth step in which by using the RFID number detected in the first step is further configured to retrieve a commercial image for a product corresponding to the detected RFID number from the image data base, and display the commercial image on the image display unit as a key, a commercial image for a product corresponding to the RFID number is retrieved from the image data base, and displayed on the image display unit.~~

In accordance with a ninth aspect of the present invention, in the product display rack method according to the seventh or eighth aspect, the control means ~~carries out a sixth step in which is further configured to,~~ upon determination that a customer has taken a plurality of products in the hand within a predetermined period of time ~~in the second step,~~ determine the functional types and the series of the plurality of the products taken by the customer in the hand ~~are determined,~~ and upon determination that the customer has taken products of the same functional type, acquire other products of the same functional type ~~are acquired as related products,~~ while upon determination that products of the same series have been taken in the hand, acquire products of another functional type of the same series ~~are acquired~~ so that commercial message sentences in association with the related products corresponding to the

acquired related product RFID numbers are displayed on the image display unit.

Moreover, in accordance with a tenth aspect of the present invention, in the product display method according to the seventh
5 or eighth aspect, the control means ~~carries out a seventh step in which is further configured to,~~ when a predetermined period of time has elapsed since the lighting or flickering of a lamp ~~in the fourth step, it is determined~~ whether or not the product taken by the customer in the hand has been returned to the product display rack
10 by using the RFID reader, and upon determination that the product has been returned, read the RFID numbers and the product display coordinates ~~are read from~~ the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in
15 the product coordinate data base.

Moreover, in accordance with an eleventh aspect of the present invention, in the product display rack method according to the ninth
aspect, the control means ~~carries out a seventh step in which is further configured to,~~ when a predetermined period of time has
20 elapsed since the lighting or flickering of a lamp, ~~in the fourth step, it is determined~~ whether or not the product taken by the customer in the hand has been returned to the product display rack by using the RFID reader, and upon determination that it has been returned, read the RFID numbers and the product display coordinates
25 ~~are read from~~ the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.

Moreover, in accordance with a twelfth aspect of the present
30 invention, in the product display rack method according to the ninth aspect, the control means ~~carries out a step in which is further configured to,~~ upon determination that the product taken by the

customer in the hand ~~in the sixth step~~ has not been returned to the product display rack, stop the lighting or flickering of the lamp in the lamp guiding unit ~~in the fourth step~~ and the image display by the image display unit ~~are stopped~~.

5 Furthermore, in accordance with a thirteenth aspect of the present invention, a product display rack program for a computer system, in which the related products in association with the product

present invention, in the product display rack program according to the ~~twelfth~~thirteenth aspect, the computer system further includes: an image display unit for displaying an image; and an image data base for storing commercial images of products in association with the RFID numbers, and this program allows the control means to realize a fifth function for retrieving a commercial image for a product corresponding to the RFID number from the image data base by using the RFID number detected by the first function as a key so that the resulting image is displayed on the image display unit.

Furthermore, in accordance with a fifteenth aspect of the present invention, the product display rack program according to the thirteenth or fourteenth aspect allows the control means to realize a sixth function in which upon determination that in the second function, a customer has taken a plurality of products in the hand within a predetermined period of time, the functional types and series of the plurality of the products taken by the customer in the hand are determined, and upon determination that products of the same functional type have been taken in the hand, other products of the same functional type are acquired as the related products, while upon determination that products of the same series have been taken in the hand, products of another functional type of the same series are acquired so that commercial message sentences in association with the related products corresponding to the acquired related product RFID numbers are displayed on the image display unit.

Furthermore, in accordance with a sixteenth aspect of the present invention, the product display rack program according to the thirteenth or fourteenth aspect allows the control means to realize a seventh function in which when a predetermined period of time has elapsed since the start of lighting or flickering of the lamp by the fourth function, it is determined whether or not the product taken by the customer in the hand has been returned to the

cosmetic lotions (products) of a plurality of companies are mounted, with an RFID reader including an antenna for reading the RFID number from each of the RFID tags of the cosmetic lotions (products) thus mounted being installed thereon, and a ~~face-washing material~~milky lotion rack 14 on which milky lotions (products) of a plurality of companies are mounted, with an RFID reading including an antenna for reading the RFID number from each of the RFID tags of the milky lotions (products) thus mounted being installed thereon, and further includes image display units 20 to 23 that are attached to the side faces of the respective racks 11 to 14 so as to display commercial images or the like of the products, and lamp guiding units 30 to 34 that are attached to the respective racks 11 to 14, and flicker lamps so as to guide the customer to the mounted products.

To the above-mentioned image display units 20 to 23 and/or lamp guiding units 30 to 34, functions for advertising and guiding another product by using voice may be added. Moreover, the number of the image displays 20 to 23 and the lamp guiding units 30 to 34 are not intended to be limited in the present invention.

Each of the RFID readers mounted on the respective product racks 11 to 14 is designed to place a large number of antennas at product mounting positions, and have such a function that depending on the position of the antenna that has received the RFD number from an RFID tag, the RFID number and the product mounting position coordinates of the product with the corresponding RFID tag mounted thereon are detected.

Each of the lamp guiding units 30 to 34 is provided with lamps (30a, 30f, 33a to 33f and other lamps whose reference numerals are omitted) indicated by star marks, which are attached to a laterally elongated product mounting position of each of the product racks 11 to 14, and has a function for selectively lighting or flickering the lamps.

The control device 200 is provided with a product data base

240 that stores an RFID number for each of different series, different product types and different functions so as to be classified for each of makers of products mounted on the intelligent rack 100, a product related information data base 260 in which the
5 RFID numbers stored in the product data base 240 in classified states in different functions, different makers and different series are developed into different functions or the like, and stored, an image data base 270 in which commercial images of products for each product type (for each RFID number) are stored, an RFID managing unit 280
10 that detects the RFID numbers and detection coordinates of display products read out by the RFID readers, and stores them in the product coordinate data base 250, a control unit 210 for controlling the RFID managing unit based on an RFID number of a product detected to be taken from a display rack, a related product retrieve guide
15 unit 220 which based upon the RFID number of a product taken by a customer in the hand, retrieves another product of the product taken by the customer in the hand, and guides the resulting product to the customer, a product image retrieving unit 230 that retrieves commercial images for the respective products stored in the image
20 data base 270, and displays the resulting image on any one of the image display units 20 to 23, and a communication unit 290 for use in communicating with the host computer 400.

In the product data base 240, as shown in FIGS. 2(a) to 2(c), the RFID numbers of products classified in different series and
25 different functions for each of the makers are stored, that is, for example, as the products of the A company, "rose series" and "lily series" are included, and the RFID numbers of products having different functions, such as "dry skin-use", "normal skin-use" and "oily skin-use", are stored for each of the series. The products
30 of the A company classified by different functions are stored such that in the case of the "skin care" function, the product types, such as "cleansing materials", "face-washing materials", "cosmetic

lotions" and "milky lotions" are present as products, and RFID numbers from "A11" to "A49" are stored as shown in the FIGS., for

search result by the searching process by the step S600 with the search result of the previous searching process, a determination is made as to whether or not any state change exists, and in the case of no state change in the determination, it is returned to the step S600, is executed.

The determination as to the state change in the step S601 is carried out so that based upon tag serial number [UID] information as the results of the previous searching process by the control device 200 (based upon tag serial numbers [UID] obtained by reading the RFID tags of all the products displayed on the product racks 11 to 14 by using all the RFID readers), the state change is determined by making a determination as to whether or not the tag serial number [UID] that was read previously is no longer read, or as to whether or not the tag serial number [UID] that was not read previously is newly read. Additionally, the tag serial number [UID] information desirably includes corresponding relations among the read UID, as well as the RFID reader and the antenna that read the corresponding UID; however, this arrangement is not necessarily required.

Next, the sequence of processes shown in FIG. 7 execute a step S602 in which when the control device 200 which has category codes of products previously taken out held in its memory determines that a state change is present in the aforementioned step S601, it updates the tag serial number [UID] information, a step S603 in which by making a determination as to whether or not a product is taken out based upon whether or not the previously read UID is detected, and when the determination that no product is taken out (a tag serial number [UID] that was not read previously is detected, and the corresponding product has been returned to the product rack) is made, the sequence returns to the aforementioned step S600, and a step S604 in which when the determination is made in the step S603 that a product is taken out, it is determined whether or not the product

information acquired in the third step on the display unit, so that information relating to the product taken by a customer in the hand can be guided to the customer and the sales operation can be promoted.

Additionally, in the above-mentioned embodiments, explanations have been given by exemplifying women's skin-care products as products; however, the target products of the present invention are not intended to be limited by these, and any product can be used as the target as long as it has a plurality of product types (category types) having different product purposes and a plurality of functional types for each of individual products, and for example, in the case of image software for use in personal computers, those products having different functional types, such as draw-type image software and vector-type image software of a plurality of makers, may be used as the target.

15 **EXPLANATION OF REFERENCE NUMERALS**

- 11 Cleansing product rack
- 12 Face-washing material rack
- 13 Cosmetic lotion rack
- 14 ~~Face-washing material~~Milky lotion rack
- 20 20 to 23 Image display unit
- 30 to 34 Lamp guiding unit
- 30a, 30f, 3a to 33f Lamp
- 41 Cleansing
- 42 Face-washing material
- 25 43 Cosmetic lotion
- 44 Milky lotion
- 100 Intelligent rack
- 200 Control device
- 210 Control unit
- 30 220 Related product retrieve guide unit
- 230 Product image retrieving unit
- 240 Product data base

CLAIMS

1. A product display rack system which displays a plurality of products having a plurality of product types and functional types,
5 each having an RFID tag having a radio communication function for an RFID number attached thereto, and related products in association with a product taken by a customer in the hand are guided to the customer, and the system includes:

a plurality of product display racks on which the plurality
10 of products with the RFID tags attached thereto are displayed; a plurality of RFID readers for detecting the RFID numbers from the RFID tags of the products displayed on the product display racks; a lamp guiding unit for guiding the customer to the position of the product displayed on each of the plurality of product display racks
15 by a lighted lamp or a flickering lamp; a product related information data base in which relations among the product types and functional types of the plurality of products are stored; a product coordinate data base in which product display coordinates for the product display rack for each of the product types are stored; and control
20 means which based upon the results of detection by the RFID reader, guides other products related to the product taken by the customer in the hand, and in this system,

the control means ~~carries out~~ is configured to: a ~~first step~~
~~for detecting~~ an RFID number of a product taken by a customer from
25 a desired display rack based upon the detection result of the RFID reader; ~~a second step for acquiring~~ acquire RFID numbers of related products having related product types and functional types relative to the product type of the RFID number from the product related information data base by using the detected RFID number ~~detected~~
30 ~~in the first step~~ as a key; ~~a third step for acquiring~~ acquire the product display coordinates of the product type from the product coordinate data base by using the acquired RFID number of the related

product ~~acquired in the second step~~ as a key; and a ~~fourth step~~
~~for effect~~ lighting or flickering the lamp of the lamp guiding unit
at a position close to the acquired product display coordinates
~~acquired in the third step~~.

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2. The product display rack system according to claim 1, wherein
the system is further provided with: an image display unit for
displaying an image; and an image data base for storing a commercial
image for a product corresponding to a RFID number, and

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the control means ~~carries out a fifth step for~~ is further
configured to retrieving-retrieve the commercial image for the
product related to the RFID number from the image data base by using
the detected RFID number ~~detected in the first step~~ as a key so as
to display the corresponding image on the image display unit.

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3. The product display rack system according to claims 1 or 2,
wherein, when, ~~in the second step~~, the control means determines that
a customer has taken a plurality of products in the hand within a
predetermined period of time, the control means ~~carries out a sixth~~

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~~step in which~~ is further configured to determine the functional types
and series of the plurality of products taken by the customer in
the hand ~~are determined~~, and upon determination that products of
the same functional type have been taken in the hand, acquire other
products having the same functional type ~~are acquired~~ as the related
25 products, while upon determination that products of the same series
have been taken in the hand, acquire other functional-type products
in the same series ~~are acquired~~ so that a commercial message sentence
relating to each of the related products corresponding to the RFID
numbers of the acquired related products is displayed on the image
30 display unit.

4. The product display rack system according to claims 1 or 2,

wherein, the control means ~~carries out a seventh step~~is further configured to determine whether or not the product that has been taken by the customer in the hand has been returned to the product display rack by using the RFID reader ~~in which~~ when a predetermined period of time has elapsed from the start of the lighting or flickering of the lamp ~~in the fourth step, a determination is made as to whether or not the product that has been taken by the customer in the hand has been returned to the product display rack by using the RFID reader,~~ and upon determination that the product has been returned, read the RFID numbers and product display coordinates ~~are read from the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.~~

5. The product display rack system according to claim 3, wherein, the control means ~~carries out a seventh step in which~~is further configured to determine whether or not the products taken by the customer in the hand have been returned to the product display rack by using the RFID reader when a predetermined period of time has elapsed from the start of the lighting or flickering of the lamp ~~in the fourth step, a determination is made as to whether or not the product taken by the customer in the hand has been returned to the product display rack by using the RFID reader,~~ and upon determination that the products has have been returned, read the RFID numbers and product display coordinates ~~are read from the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.~~

6. The product display rack system according to claim 3, wherein, the control means ~~carries out a step in which~~is further configured

to, upon determination that the products taken by the customer in the hand ~~in the sixth step~~ has ~~have~~ not been returned to the product display rack, stop the lighting or flickering of the lamp in the lamp guiding unit ~~in the fourth step~~ and the image display by the image display unit ~~are stopped~~.

7. ~~The~~ A product display rack method for a computer system which can guide other products related to the product taken by the customer in the hand, and the system includes: a plurality of product display racks on which a plurality of products having a plurality of product types and functional types, each having an RFID tag having a radio communication function for an RFID number attached thereto, are displayed; a plurality of RFID readers for detecting the RFID numbers from the RFID tags of the products displayed on the product display racks; a lamp guiding unit for guiding the customer to the position of the product displayed on each of the plurality of product display racks by a lighted lamp or a flickering lamp; a product related information data base in which relations among the product types and functional types of the plurality of products are stored; a product coordinate data base in which product display coordinates for the product display rack for each of the product types are stored; and control means which based upon the results of detection by the RFID reader,

the control means ~~carries out: a first step for detecting is~~ configured to detect an RFID number of a product taken by a customer from a desired display rack based upon the detection result of the RFID reader; ~~a second step for acquiring~~ acquire RFID numbers of related products having related product types and functional types relative to the product type of the RFID number from the product related information data base by using the detected RFID number ~~detected in the first step~~ as a key; ~~a third step for acquiring~~ acquire the product display coordinates of the product type from

the product coordinate data base by using the acquired RFID number of the related product ~~acquired in the second step~~ as a key; and ~~a fourth step for~~ effect lighting or flickering the lamp of the lamp guiding unit at a position close to the acquired product display coordinates ~~acquired in the third step~~.

8. The product display rack method according to claim 7, wherein, the computer system further includes: an image display unit for displaying an image; and an image data base for storing a commercial image of a product corresponding to the RFID number,

the control means ~~carries out a fifth step in which~~ is further configured to retrieve a commercial image for a product corresponding to the detected RFID number from the image data base, and display the commercial image on the image display unit by using the RFID number detected in the first step as a key, ~~a commercial image for a product corresponding to the RFID number is retrieved from the image data base, and displayed on the image display unit.~~

9. The product display rack method according to claims 7 or 8, wherein, the control means ~~carries out a sixth step in which~~ is further configured to, upon determination that a customer has taken a plurality of products in the hand within a predetermined period of time ~~in the second step,~~ determine the functional types and the series of the plurality of the products taken by the customer in the hand ~~are determined,~~ and upon determination that the customer has taken products of the same functional type, acquire other products of the same functional type ~~are acquired as related products,~~ while upon determination that products of the same series have been taken in the hand, acquire products of another functional type of the same series ~~are acquired~~ so that commercial message sentences in association with the related products corresponding to the acquired related product RFID numbers are displayed on the image

display unit.

10. The product display rack method according to claims 7 or 8, wherein, the control means ~~carries out a seventh step in which~~
5 further configured to, when a predetermined period of time has elapsed since the lighting or flickering of a lamp ~~in the fourth step, it is determined~~ determine whether or not the product taken by the customer in the hand has been returned to the product display rack by using the RFID reader, and upon determination that the
10 product has been returned, read the RFID numbers and the product display coordinates ~~are read~~ from the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.

11. The product display rack method according to claim 9, wherein, the control means ~~carries out a seventh step in which~~
15 is further configured to, when a predetermined period of time has elapsed since the lighting or flickering of a lamp ~~in the fourth step, it is determined~~ whether or not the product taken by the customer in the
20 hand has been returned to the product display rack by using the RFID reader, and upon determination that it has been returned, read the RFID numbers and the product display coordinates ~~are read~~ from the RFID tags of all the products displayed on the plurality of the
25 product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.

12. The product display rack method according to claim 9, wherein,
30 the control means ~~carries out a step in which~~ is further configured to, upon determination that the product taken by the customer in the hand ~~in the sixth step~~ has not been returned to the product

display rack, stop the lighting or flickering of the lamp in the lamp guiding unit ~~in the fourth step~~ and the image display by the image display unit ~~are stopped~~.

5 13. ~~The A~~ product display rack program for a computer system, in which the related products in association with the product taken by the customer in the hand are guided to the customer, the computer system includes a plurality of product display racks on which a plurality of products having a plurality of product types and
10 functional types, with RFID tags capable of exerting a radio communication function for RFID numbers being attached thereto, are displayed; a plurality of RFID readers for detecting the RFID numbers from the RFID tags of the products displayed on the product display racks; a lamp guiding unit for guiding the customer to the product
15 position displayed on each of the plurality of product display racks by a lighted lamp or a flickering lamp; a product related information data base in which relationships among the product types and functional types of the plurality of the products are stored; a product coordinate data base in which product display coordinates
20 for the product display rack for each of the product types are stored; and control means which based upon the results of detection by the RFID reader, guides other products related to a product taken by the customer in the hand, and

the program allows the control means to realize a first function
25 for detecting an RFID number of a product taken by a customer from a desired display rack based upon the detection result of the RFID reader; a second function for acquiring RFID numbers of related products having corresponding product types and functional types relative to the product type of the RFID number from the product
30 related information data base by using the RFID number detected in the first function as a key; a third function for acquiring the product display coordinates of the product type from the product

coordinate data base by using the RFID number of the related product acquired in the second function as a key; and a fourth function for lighting or flickering the lamp of the lamp guiding unit at a position close to the product display coordinates acquired in the third
5 function.

14. The product display rack program according to claim 13, wherein, the computer system further includes: an image display unit for displaying an image; and an image data base for storing
10 commercial images of products in association with the RFID numbers, the program allows the control means to realize a fifth function for retrieving a commercial image for a product corresponding to the RFID number from the image data base by using the RFID number detected by the first function as a key so that the resulting image
15 is displayed on the image display unit.

15. The product display rack program according to claims 13 or 14, wherein,

the program allows the control means to realize a sixth
20 function in which upon determination that in the second function, a customer has taken a plurality of products in the hand within a predetermined period of time, the functional types and series of the plurality of the products taken by the customer in the hand are determined, and upon determination that products of the same
25 functional type have been taken in the hand, other products of the same functional type are acquired as the related products, while upon determination that products of the same series have been taken in the hand, products of another functional type of the same series are acquired so that commercial message sentences in association
30 with the related products corresponding to the acquired related product RFID numbers are displayed on the image display unit.

16. The product display rack program according to claims 13 or 14, wherein,

the program allows the control means to realize a seventh function in which when a predetermined period of time has elapsed since the start of lighting or flickering of the lamp by the fourth function, it is determined whether or not the product taken by the customer in the hand has been returned to the product display rack by using the RFID reader, and upon determination that it has been returned, the RFID numbers and the product display coordinates are read from the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.

17. The product display rack program according to claim 15, wherein,

the program allows the control means to realize a seventh function in which when a predetermined period of time has elapsed since the start of lighting or flickering of the lamp by the fourth function, it is determined whether or not the product taken by the customer in the hand has been returned to the product display rack by using the RFID reader, and upon determination that it has been returned, the RFID numbers and the product display coordinates are read from the RFID tags of all the products displayed on the plurality of the product display racks so that the product display coordinates for each of the product types are stored in the product coordinate data base.

18. The product display rack program according to claim 15, wherein,

the program allows the control means to carry out a process in which upon determination that the product taken by the customer

in the hand in the sixth function has not been returned to the product display rack, the lighting or flickering of the lamp in the lamp guiding unit and the image display by the image display unit in the fourth function are stopped.