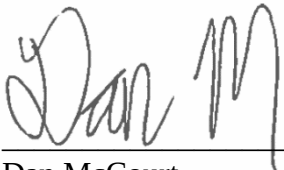




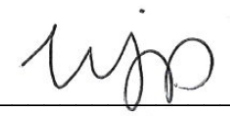
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I, Dan McCourt, hereby certify that the document “**JP2011076222A**” is, to the best of my knowledge and belief, a true and accurate translation from Japanese into English.



Dan McCourt

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August 11, 2023



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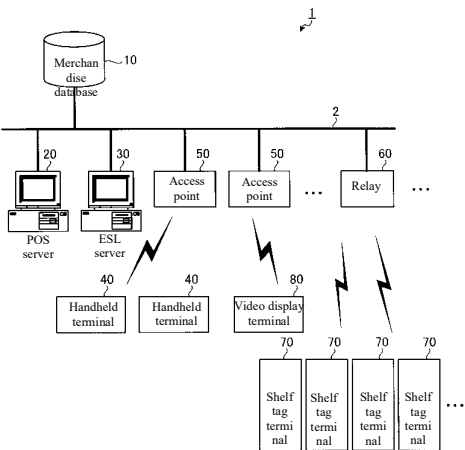
(54)[Title of the invention] Merchandise Information Display System

(57) [Abstract]

[Problem] To obtain merchandise information display system that can reduce the amount of preparation work at a point of sale in a store when displaying images of merchandise at the point of sale.

[Means for Solving] A merchandise information display system 1 is provided with a shelf tag terminal 70 as merchandise information display terminal that displays text information about merchandise, and an image display terminal 80 that displays images relating to the merchandise, having a larger display area than the shelf tag terminal 70, wherein the images relating to the merchandise can be displayed based on data received from an ESL server 30 using the image display terminal 80. Therefore, it is possible to reduce the amount of preparation work when displaying images of merchandise at a point of sale in a store, compared to cases where standalone video equipment or display devices are installed.

[Representative Drawing] FIG. 1



[Scope of Patent Claims]

[Claim 1]

A merchandise information display system in which a server device which transmits data relating to merchandise and a merchandise information display terminal which is installed in a store and presents merchandise information are connected via an electric communication line, and data relating to the merchandise corresponding to the merchandise information display terminal is transmitted from the server device to the merchandise information display terminal, and merchandise information of the merchandise is displayed in the merchandise information display terminal, comprising,

as the merchandise information display terminal, a shelf tag terminal that displays text information relating to the merchandise, and an image display terminal that has a larger display area than the shelf tag terminal and displays images relating to the merchandise.

EMPTY SEGMENT

[Claim 2]

The merchandise information display system according to claim 1, wherein the image display terminal is capable of displaying video relating to a plurality of merchandise items.

[Claim 3]

The merchandise information display system according to claim 1 or 2, comprising an input operation unit that performs input operations to switch the images displayed in the image display terminal.

[Claim 4]

The merchandise information display system according to any one of claims 1 to 3, wherein the image display terminal displays three-dimensional images of the merchandise.

[Claim 5]

The merchandise information display system according to any one of claims 1 to 3, wherein the image display terminal displays video of the merchandise.

[Claim 6]

A merchandise information display system in which a server device which transmits data relating to merchandise and a merchandise information display terminal which is installed in a store and presents merchandise information are connected via an electric communication line, and data relating to the merchandise corresponding to the merchandise information display terminal is transmitted from the server device to the merchandise information display terminal, and merchandise information of the merchandise is displayed in the merchandise information display terminal, comprising

as the merchandise information display terminal, a merchandise information display terminal having a first display portion that mainly displays text information relating to the merchandise and a second display portion that has a larger display area than the first display portion and mainly displays images relating to the merchandise.

[Detailed Description of Invention]

[Technical Field]

【 0 0 0 1 】

The present invention relates to a merchandise information display system.

[Prior Art]

【 0 0 0 2 】

Electronic shelf tag systems are conventionally known which use electronic versions of shelf tags that display prices of merchandise, etc. In such electronic shelf tag systems, codes that identify merchandise and codes that identify shelf tags are read in the handheld terminal, etc., and the merchandise and shelf tags are linked in the electronic shelf tag system. In addition, merchandise data is transmitted via a wireless or wired network to shelf tags associated with the merchandise, and information such as the prices of the merchandise is displayed in the shelf tags (e.g., Patent Literature 1).

[Outline of the Invention]

[Problem to be Solved by the Invention]

【 0 0 0 3 】

Now, video equipment and display devices have conventionally been used in stores to display video and still images, etc., of merchandise being promoted. Such methods can be used not only for marketing promotion of promotion, but also to avoid putting actual items on display, such as expensive or popular items, in order to avoid soiling or theft thereof, etc.

【 0 0 0 4 】

However, it takes time and effort to install standalone video equipment and display devices (using storage media such as video tapes and DVDs) at the point of sale in the store, and it also takes time and effort to switch out the storage media when changing the target merchandise.

【 0 0 0 5 】

Therefore, the present invention has as an objective to obtain a merchandise information display system that can reduce the amount of preparation work at a point of sale in a store in order to display images relating to the merchandise at the point of sale in the store.

[Means for Solving the Problems]

【 0 0 0 6 】

The present invention is a merchandise information display system in which a server device which transmits data relating to merchandise and a merchandise information display terminal which is installed in a store and presents merchandise information are connected via an electric communication line, and data relating to the merchandise corresponding to the merchandise information display terminal is transmitted from the server device to the merchandise information display terminal, and merchandise information of the merchandise is displayed in the merchandise information display terminal, comprising, as the merchandise information display terminal, a shelf tag terminal that displays text information relating to the merchandise, and an image display terminal that has a larger display area than the shelf tag terminal and displays images relating to the merchandise.

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[Effects of the Invention]

【 0 0 0 7 】

The merchandise information display system according to the present invention, comprises, as the merchandise information display terminal, a shelf tag terminal that displays text information relating to the merchandise, and an image display terminal that has a larger display area than the shelf tag terminal and displays images relating to the merchandise, and can therefore display images related to the merchandise in the image display terminal based on data transmitted from the server device. Thus, with the present invention, when displaying images relating to the merchandise at the point of sale in the store, preparation work can be reduced compared to when installing a stand-alone video device or display device.

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[Brief Description of the Drawings]

【 0 0 0 8 】

FIG. 1 is a block diagram showing a schematic configuration of a merchandise information display system according to an embodiment of the present invention.

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FIG. 2 is a view showing an example of merchandise data stored in a merchandise database.

FIG. 3 is a view showing an example of merchandise data including image data stored in the merchandise database.

FIG. 4 is a schematic view showing terminal codes and item codes stored in a storage unit of an ESL server in association with each other, (a) being a view showing one terminal code associated with one item code, and (b) being a view showing a plurality of terminal codes and a plurality of item codes associated with each other.

FIG. 5 is a perspective view showing an example of a shelf tag terminal and an image display terminal.

FIG. 6 is a block diagram showing a schematic configuration of a merchandise database, a POS server, and an ESL server.

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FIG. 7 is a block diagram showing a schematic configuration of a handheld terminal.

FIG. 8 is a block diagram showing a schematic configuration of an access point and a relay.

FIG. 9 is a block diagram showing a schematic configuration of a shelf tag terminal.

FIG. 10 is a block diagram showing a schematic configuration of an image display terminal.

FIG. 11 is a block diagram showing a schematic configuration of a CPU of the ESL server.

FIG. 12 is a flow chart showing an example of code registration and data transmission by the ESL server.

FIG. 13 is a flowchart showing a procedure for reading terminal codes and item codes by a handheld terminal, (a) being a case where one terminal code and one item code are read, and (b) being a case where multiple terminal codes and multiple item codes are read.

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FIG. 14 is a perspective view showing a variation of a shelf tag terminal and an image display terminal.

[Embodiments]

【 0 0 0 9 】

Embodiments of the present invention will be described in detail below with reference to the drawings. Note that the following embodiments and variations include similar components. Therefore, similar components will be given the same reference numeral and redundant descriptions will be omitted below.

【 0 0 1 0 】

<General System Configuration> As shown in FIG. 1, a merchandise information display system 1 according to one embodiment of the present invention comprises a merchandise database 10, a point of sale (POS) server 20, an electronic shelf label (ESL) server 30, a handheld terminal 40, an access point 50, a relay 60, a shelf tag terminal 70, and an image display terminal 80. In the present embodiment, the shelf tag terminal 70 and the image display terminal 80 display information about the merchandise, and correspond to the merchandise information display terminal. Furthermore, in the present embodiment, the ESL server 30 corresponds to the server device.

【 0 0 1 1 】

In the merchandise information display system 1, the merchandise database 10, the POS server 20, the ESL server 30, the access point 50, and the relay 60 are connected via a wired network 2. In addition, the handheld terminal 40 and the image display terminal 80 are wirelessly connected to the access point 50, and the shelf tag terminal 70 is wirelessly connected to the relay 60. In this embodiment, the wired network 2 and the communication network using a wireless connection correspond to the electric communication line.

【 0 0 1 2 】

The merchandise database 10 is a database device that stores and manages various types of information relating to merchandise handled by stores. As shown in FIG. 2, the merchandise database 10 stores merchandise data 10a that shows information such as merchandise name, merchandise unit price, merchandise sales price, and merchandise classification code, etc., in association with merchandise codes.

【 0 0 1 3 】

Furthermore, as shown in FIG. 3, the merchandise database 10 includes merchandise data 10b, including the image data of the merchandise, in association with the merchandise codes. In the present embodiment, a plurality of video data can be stored in association with a single merchandise code. The plurality of image data can include image data in different views (view 1, view 2, e.g., frontal images, perspective images, side images, etc.). In addition, the image data can be still image data or video data. In addition, the image data can be image data for display in a known three-dimensional display device or image data for display in a known two-dimensional display device. Various types of image data formats can be used.

【 0 0 1 4 】

The POS server 20 is a computer serves as the backbone of the POS system and is connected to a POS terminal not shown in the drawings via a communication line not shown in the drawings. The POS terminal registers and processes sales data of merchandise purchased by customers and processes payments according to various payment methods such as cash, credit card, prepaid card, electronic money, debit card, and so on. The POS server 20 receives instructions such as to redisplay a specific shelf tag terminal 70 from an operator operating the POS server 20 or from the POS terminal, etc., and transmits instruction data indicating the details of this instructions to the ESL server 30.

【 0 0 1 5 】

The ESL server 30 constitutes an information processing device that manages the ESL system described below together with the relay 60 and controls operation of the shelf tag terminal 70. Specifically, upon receiving the instruction data from the POS server 20, the ESL server 30 transmits commands and data (the commands and data hereinafter referred to simply as command data) to the shelf tag terminal 70, via the relay 60, for causing the shelf tag terminal 70 specified by the instruction data to execute the operations indicated by the instruction data.

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【 0 0 1 6 】

In addition, the ESL server 30 comprises a storage portion 106 such as a hard disk (see FIG. 6) in which merchandise codes for identifying merchandise are stored in association with terminal codes for identifying the shelf tag terminals 70, as shown in FIG. 4. When displaying information of a single merchandise item in a single merchandise information display terminal, the storage unit 106 stores one merchandise code in association with one terminal code, as shown in FIG. 4(a). In addition, when displaying information of a plurality of merchandise items using a plurality of merchandise information display terminals, as shown in FIG. 4(b), a plurality of merchandise codes are stored in association with multiple terminal codes. It should be noted that the terminal codes are distinguished between the shelf tag terminal 70 and the image display terminal 80, for example, by varying the range of values or the value of a specific bit, etc., and are set so as to allow determination of which terminal code is being used.

【 0 0 1 7 】

The handheld terminal 40 is a portable information processing device operated by store staff, etc., and can read the terminal code of the shelf tag terminal 70 and the merchandise code of the merchandise. In this embodiment, the handheld terminal 40 corresponds to a code reader. The terminal code and merchandise code read by the handheld terminal 40 are transmitted to the ESL server 30 via the access point 50 and stored in correspondence with each other in the storage unit 106 of the ESL server 30. Also, in the present embodiment, the merchandise code and the terminal code are displayed as barcodes, and the handheld terminal 40 is configured as a barcode reader.

【 0 0 1 8 】

The access point 50 is a wireless network device for connecting a device (the ESL server 30) connected to the wired network 2 to the handheld terminal 40 and the image display terminal 80, and performs wireless LAN (Local Area Network)-to-wired LAN protocol conversion. In addition, the relay 60 is a wireless network device for connecting a device (ESL server 30) connected to the wired network 2 and the shelf tag terminal 70, and performs wireless LAN-to-wired LAN protocol conversion.

【 0 0 1 9 】

The shelf tag terminal 70 is provided at an edge 78a, etc., of a merchandise display shelf 78 in the store, and displays (presents) information relating to the corresponding merchandise. As shown in FIG. 5, the shelf tag terminal 70 is provided with a display portion 70a that displays information including text information relating to merchandise such as merchandise name and price on the front side of the thin plate (label-shaped) housing, and a terminal code display portion 70b that shows a barcode as the terminal code.コード表示部 7 0 b と、を備えている。

【 0 0 2 0 】

As shown in FIG. 5, the image display terminal 80 is provided with a display area D that is larger than the display portion 70a of the shelf tag terminal 70 (note, however, that this comparison is of the projection planes generally from a customer's perspective), and this display area D displays images P relating to the merchandise. FIG. 5 illustrates a case in which the display device is configured as a display device which displays a three-dimensional image (the image P) showing the appearance of the merchandise. The display device displaying the three-dimensional image can be configured by, for example, applying the known techniques disclosed in JP 2009-145855 A, JP 2007-199427 A, JP 2005-234240, and the like. It is also possible to configure the image display terminal 80 as a known display device (e.g., a cathode ray tube (CRT) or liquid crystal display (LCD)) that displays two-dimensional images of the merchandise. In such cases, the display area D is flat.

【 0 0 2 1 】

In addition, in the present embodiment, a housing 80o of the image display terminal 80 is provided with a terminal code display portion 80p showing a barcode as the terminal code, and an input operation portion 80j is also provided for users (customers, store employees, etc.) to perform operations for switching the images P. Note that the image display terminal 80 may display not only the appearance of the merchandise, but also cross-sections and other images, display still images, and display videos such as usage and commercial video.

【 0 0 2 2 】

<Configuration of System Parts> The merchandise database 10, the POS server 20, and the ESL server 30 may be configured as a computer. As shown in FIG. 6, in the present embodiment, the computers operating as the merchandise database 10, the POS server 20, and the ESL server 30 are each provided with: a CPU (central processing unit) 101 that

processes information; a ROM (read only memory) 102, which stores the BIOS, etc., and is only for reading; a RAM (random access memory) 103 in which data can be rewritten; a display unit 104 such as a CRT or LCD that displays processing progress and results, etc.; an input unit 105 which is a pointing device such as a keyboard or mouse for an operator to enter instructions and information, etc., into the CPU 101; the storage unit 106, which is a hard disk (HDD, hard disk drive) that functions as a database and stores various types of programs; a media reading unit 107 such as a CD-ROM drive, etc., for using a storage medium M to store information, distribute information to the outside, and acquire information from the outside; and a communication interface 108 for transmitting information using communication with other external equipment over communication lines; and all of these parts are connected by a bus 109.

【 0 0 2 3 】

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In these computers, when the operator turns the power on, the CPU 101 launches a loader (program) in the ROM 102, and then loads the operating system (a program that manages the computer's hardware and software) from the memory 106, into the RAM 103 to launch the operating system. The OS launches programs and loads and saves information in accordance with operator operations. Programs running on the OS are known as application programs. It should be noted that the application programs are not limited to operating on the OS, may replace the operating system in executing some of the processes described below, and may be included as part of a set of program files that make up prescribed application software and/or the OS, etc.

【 0 0 2 4 】

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In the present embodiment, due to differences in the application programs stored in the storage portion 106, the computers function as the merchandise database 10, the POS server 20, and the ESL server 30.

【 0 0 2 5 】

In addition, in general, application programs installed in the storage portion 106 of a personal computer are stored on the storage medium M, including various optical disks such as CD-ROMs and DVDs, various magnetic disks such as optical magnetic disks, flexible disks, and various media systems such as semiconductor memory, and operation programs stored on this storage medium M are installed in the storage unit 106. For this reason, the storage medium M, which is portable, being optical information recording media such as a CD-ROM or magnetic media such as an FD, may also be a storage medium that stores application programs. Further, the application programs may be retrieved from the outside via, for example, the communication interface 108 and installed in the storage unit 106.

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【 0 0 2 6 】

The handheld terminal 40 can also be configured as a computer, and in the present embodiment, as shown in FIG. 7, includes: a control unit 40a which is configured as a CPU, etc., and performs information processing; a storage unit 40b configured including a RAM, a ROM, or a hard disk, etc.; an operation panel 40c configured as a touch panel display and serving as both an input unit and a display output unit; a code reading unit 40e that reads merchandise codes and terminal codes; a code reading unit interface 40d that controls the code reading unit 40a based on instructions from the control unit 40a, causes the code reading unit 40e to operate, and transmits to the control unit 40a merchandise codes and terminal codes read by the code reading unit 40e; and a wireless LAN interface 40f which controls a wireless connection using wireless LAN with an access point 50.

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【 0 0 2 7 】

In the handheld terminal 40, like with the merchandise database 10, the POS server 20, and the ESL server 30, when the operator turns on the power, the CPU 40a executes an application program in the storage unit 40b, and the computer operating according to this application program functions as the handheld terminal 40.

【 0 0 2 8 】

The access point 50 and the relay 60 are also common wireless communication devices. As shown in FIG. 8, the

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wireless communication device that is the access point 50 and the relay 60 includes: a CPU 201 that processes information such as protocol conversion; a storage unit 202, being an EEPROM, etc., which stores the BIOS, various programs, and settings information, etc.; a RAM 203 which rewriteably stores various data; a wired LAN interface 204 for transmits information by communicating with other devices on the wired LAN; and a wireless LAN interface 205 for transmitting information by communicating with other devices on the wireless LAN; each of which is connected to a bus 206.

【 0 0 2 9 】

In this wireless communication device, when the operator turns on the power, the CPU 201 executes a program in the storage unit 202 and performs operations in accordance with the configuration information to provide functionality as a wireless communication device. In this embodiment, due to differences in programs and setting information stored in the storage unit 202, the wireless communication device functions as the access point 50 and the relay 60.

【 0 0 3 0 】

As shown in FIG. 9, the shelf tag terminal 70 is provided with the display portion 70a, a battery 73 as a drive source, a communication unit 74 that communicates data with the ESL server 30 via the relay 60, a non-volatile storage unit 75, a timer unit 76 used for synchronization and time measurement during communication control, and a control unit 77 that controls each unit. Of these, the storage unit 75 stores data for indicating text information such as the merchandise name and price, etc., for display in the display portion 70a transmitted from the ESL server 30.

【 0 0 3 1 】

In addition, as shown in FIG. 10, the image display terminal 80 comprises a CPU 80a, a ROM 80b, a RAM 80c, a wireless LAN interface 80d, a wired LAN interface 80e, a display controller 80f, an input operation unit controller 80g, and a hard disk controller 80h. As shown in FIG. 10, these are connected via a bus line 80m, such as an address bus, a data bus, etc.

【 0 0 3 2 】

The CPU 80a controls the image display terminal 80 by executing various computer-readable programs stored in the ROM 80b. The ROM 80b stores various programs and data that the CPU 80a executes. The RAM 80c temporarily stores data and programs when the CPU 80a executes various programs.

【 0 0 3 3 】

The wireless LAN interface 80d controls data communication with other devices that are wirelessly connected via the antenna 80n. The wired LAN interface 80e is provided to allow a wired connection for the image display terminal 80 to the ESL server 30, and controls data communication via the electric communication line provided for the wired connection when a wired connection is made. The display controller 80f controls driving of the display portion 80i displaying three-dimensional or two-dimensional images to cause the characters, etc., corresponding to the display data provided by the CPU 80a to be displayed in color. The input operation unit controller 80g reads key signals corresponding to operation keys from the input operation unit 80j and announces these to the CPU 80a.

【 0 0 3 4 】

The hard disk controller 80h controls writing and reading data to the hard disk 80k based on instruction signals from the CPU 80a. The hard disk 80k stores data (data indicating image data or text information) related to merchandise received from the ESL server 30 via the wireless LAN interface 80d or the wired LAN interface 80e. If the terminal codes of the plurality of merchandise items are associated with the terminal codes in the image display terminal 80, the hard disk 80k can store data indicating images and text information about the plurality of merchandise items.

【 0 0 3 5 】

<Associating Merchandise with Merchandise Information Display Terminal> In this embodiment, as shown in FIG. 11, the CPU 31 (101) of the ESL server 30 (see also FIG. 6) operates as a code registration unit 31a, a code determination unit 31b, and a data transmission control unit 31c according to the application program. Specifically, the program for the ESL server 30 includes modules that causes the computer to function as the code registration unit 31a, the code determination unit 31b, and the data transmission control unit 31c.

【 0 0 3 6 】

Referring now to Figs. 12 and 13, the flow through to the merchandise being associated with the merchandise information display terminal and the corresponding merchandise data being transmitted from the ESL server to the merchandise information display terminal is described.

【 0 0 3 7 】

First, at the store's point of sale, etc., store employees, etc., use the handheld terminal 40 to perform registration processing to associate the merchandise with the merchandise information display terminal. As an example, when associating one merchandise item with a shelf tag terminal 70 as the merchandise information display terminal, an employee of a store, for example, uses the handheld terminal 40 to read the barcode serving as the terminal code from the terminal code display portion 70b of the shelf tag terminal 70, and then reads the barcode serving as the merchandise code attached to the box, packaging film, or price tag, etc., of the merchandise. As another example, when associating a plurality of merchandise items with the shelf tag terminal 70 and the image display terminal 80 as merchandise information display terminals, an employee of a store, for example, uses the handheld terminal 40 to read the barcodes serving as the terminal codes from the terminal code display portions 70b of the shelf tag terminals 70, then reads the barcodes serving as the terminal codes from the terminal code display portions 80p of the image display terminals 80, and then reads the barcodes serving as merchandise codes for the plurality of merchandise items. According to this embodiment, this relatively simple operation can associate the merchandise, the shelf tag terminal 70, and the image display terminal 80 with each other. Note that the reading of terminal codes and merchandise codes shown in FIG. 13(a) and (b) may be performed according to the guidance indication in the handheld terminal 40, or may be performed by operations input by an operator (i.e., a store employee, etc.) in the operation panel 40c.

【 0 0 3 8 】

When the terminal code and merchandise code are read in the handheld terminal 40 in the procedure of FIG. 13, data indicating the terminal code and merchandise code is transmitted from the handheld terminal 40 to the ESL server 30. When that is done, data indicating the terminal codes and merchandise codes are sent together or with data indicating associations, for example, so the CPU 31 of the ESL server 30 can be aware of the associations there between.

【 0 0 3 9 】

As shown in FIG. 12, upon receiving data indicating the terminal codes and the merchandise codes (step S10), when the CPU 31 of the ESL server 30 operates as the code registration unit 31a (see FIG. 11) and stores the terminal codes and the merchandise codes in the storage unit 106 of the ESL server 30 (see FIG. 6) in association with each other as shown in FIG. 4 (step S11).

【 0 0 4 0 】

Next, the CPU 31 of the ESL server 30 operates as the code determination unit 31b (FIG. 11) and performs different processes depending on the code included. In other words, if the received data includes the terminal code of the shelf tag terminal 70 (Yes in step S12), the CPU 31 operating as the data transmission control unit 31c retrieves from the merchandise database 10 data relating to the merchandise to which the merchandise code corresponding to the terminal code of the shelf tag terminal 70 has been assigned and sends that data to the shelf tag terminal 70 (step S13). The data transmitted in step S13 is mainly data for displaying text information (see FIG. 5) indicating merchandise, prices (sale prices), etc., in the shelf tag terminal 70. Note that the data transmitted by the shelf tag terminal 70 can be transmitted as image data that is provided for display in the display portion 70a of the shelf tag terminal 70. In this case, the storage unit 106, not shown, stores data indicating the text in advance. Alternatively, the transmitted data may be data indicating text information. In this case, the image data indicating the text to be displayed in the display portion 70a is generated by the shelf tag terminal 70 based on the received text information.

【 0 0 4 1 】

On the other hand, if the data received by the ESL server 30 includes the terminal code of the image display terminal 80 (Yes in step S14), the CPU 31 operating as the data transmission control unit 31c retrieves from the merchandise database 10 data relating to the merchandise to which the merchandise code associated with the terminal code of the image display terminal 80 is assigned and sends the data to the image display terminal 80 (step S15). The data transmitted in step S15 is mainly data (video data or still image data) for displaying images P (see FIG. 5) such as the appearance or a cross-section of the merchandise displayed in the display area D of the image display terminal 80. The data may include data indicating the image content as well as data for controlling the images. The CPU 31 carries out the processes in steps S12 through S15 for all received terminal codes. If the answer in steps S12 and S14 is No, the process in step S13 or S15 is skipped.

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【 0 0 4 2 】

In addition, in the shelf tag terminal 70 and the image display terminal 80, information of the merchandise is displayed in a form as illustrated in FIG. 5. In the example of FIG. 5, an image (still image) showing the appearance of the merchandise is displayed in the image display terminal 80, and text indicating the merchandise name and price of the merchandise is displayed in the shelf tag terminal 70. This display continues until, for example, a termination command is received from the ESL server 30, or until the terminals are turned off, etc.

【 0 0 4 3 】

In addition, when the “Display Switch” button is pressed in the input operation unit 80j shown in FIG. 5, the image display terminal 80 can display image video (images of different views, appearance images, cross-sectional images, etc.) of the same merchandise item. In this case, the CPU 80a may download to the storage unit a plurality of image data for the same merchandise item from the ESL server 30 such as the hard disk 80k in advance, change the image data to be displayed in the display portion 80i in response to operation input in the input operation unit 80j, or the CPU 80a may download the applicable video data from the ESL server 30 to a storage portion such as a hard disk 80k in response to operation input in the input operation unit 80j in the display portion 80i.

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【 0 0 4 4 】

On the other hand, when the “Switch Merchandise” button is pressed in the input operation unit 80j shown in FIG. 5, the image display terminal 80 can switch between and display images for a plurality of merchandise items. In this case, image data for multiple merchandise items may be downloaded from the ESL server 30 in advance to the storage unit such as a hard disk 80k, and the CPU 80a may change the merchandise displayed in the display portion 80i in response to operation input in the input operation portion 80j, or the CPU 80a may download the video data for the applicable merchandise from the ESL server 30 to the storage unit such as a hard disk 80k in response to operation input in the input operation unit 80j.

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【 0 0 4 5 】

As explained above, the merchandise information display system 1 according to the present embodiment is provided with, as the merchandise information display terminal, the shelf tag terminal 70 which displays text information about the merchandise, an image display terminal 80 which has a larger display area than the shelf tag terminal 70 and displays images relating to the merchandise based on data received from the ESL server 30 in the image display terminal 80. Therefore, the advantage is provided of making it possible to omit displaying actual merchandise, thereby being able to avoid merchandise soiling and theft, etc., and allowing customers to choose the desired merchandise. In addition, regardless of the presence or absence of physical displays, the effect is obtained of customers' interest in the merchandise being increased, contributing to sales promotion. In accordance with this embodiment, when displaying images relating to merchandise at a point of sale in a store, preparation work can be reduced compared to when installing a stand-alone video device or display device.

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[0046]

In addition, in the present embodiment, the terminal code of the image display terminal 80 read by the handheld terminal 40 serving as a code reader is associated with the merchandise code read by the handheld terminal 40. Thus, the merchandise and the image display terminal 80 can be relatively easily associated with each other. Furthermore, the

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handheld terminal 40 can also read the terminal code of the shelf tag terminal 70, so it is possible to more easily and smoothly prepare the display of text information about the merchandise in the shelf tag terminal 70 and the display of images relating to the merchandise in the image display terminal 80.

【 0 0 4 7 】

Also, in the present embodiment, the image display terminal 80 is capable of displaying images of a plurality of merchandise items. Thus, the above effect according to the present invention can be obtained for a plurality of merchandise items. Also, by switching between merchandise items for which images are displayed, customers can select the desired merchandise item from among multiple merchandise items.

【 0 0 4 8 】

In addition, in the present embodiment, an input operation unit 80j with which input operations are carried out to switch images displayed in the image display terminal 80 is provided. Therefore, the video displayed in the images display terminal 80 can be changed by operation input in the input operation unit 80j by an employee or customer of the store through a relatively simple operation at the point of sale. Customers can thus become familiar with the appearance, etc., of a merchandise item from various angles, making it easier to examine the merchandise. In addition, customers can easily select the desired merchandise if multiple merchandise images can be switched and checked.

【 0 0 4 9 】

Also, in the present embodiment, the image display terminal 80 displays a three-dimensional image of the item. Customers can thus better understand the appearance, etc., of merchandise, making it easier to examine merchandise. In addition, for stores, the effect is that the customer's interest in the merchandise increases, which contributes to sales promotion.

【 0 0 5 0 】

Also, in the present embodiment, the image display terminal 80 displays images of the merchandise. As a result, customers can better understand the appearance, modes of use, operation, and so on of merchandise, making it easier to select merchandise. In addition, for stores, the effect is that the customer's interest in the merchandise will be further increased, which contributes to sales promotion.

【 0 0 5 1 】

Although preferable embodiments of the invention have been described above, the invention is not limited to the above embodiments, and various variations are possible. For example, as shown in FIG. 14, the merchandise information display system 1 may include merchandise an information display terminal 80A having a first display portion 70aA that mainly displays text information about the merchandise, and a display portion D serving as a second display portion that has a display portion larger than the first display portion 70aA and mainly displays images about the merchandise (note, however, that this comparison is of the projection planes generally from a customer's perspective). This can be said to be an integral combination of the shelf tag terminal 70 and the image display terminal 80. Therefore, according to such a configuration, the processing load in the ESL server 30 is reduced proportionally to the reduction in the number of terminal codes, reading by the handheld terminal 40 serving as a code reader is simplified, and the time required for the reading process is reduced. In this variation, the first display unit 70aA is configured as a touch panel, and an input operation unit 80jA is formed in part thereof. In FIG. 14, in the input operation unit 80jA, the pressing region indicated by the triangle is the portion that switches merchandise items, and the pressing region that says [Different View] is the portion that switches views of the merchandise.

【 0 0 5 2 】

In addition, the input operation section may be configured separately from the video display terminal, the shelf tag terminal is not limited to what is illustrated in the above embodiments, and various variations are possible. In addition, code in a format other than a barcode can be used as the terminal code and merchandise code. In addition, data indicating images of merchandise may be sent to the image display terminal via the shelf tag terminal. In addition, the image display terminal or the second display unit may display text information about the merchandise along with images relating to the merchandise.

[Industrial Applicability]

【 0 0 5 3 】

As described above, the merchandise information display system according to the present invention is useful as a system for displaying images of merchandise in stores, and in particular useful for electronic shelf tag systems.

[Explanation of the References]

【 0 0 5 4 】

- 1 Merchandise information display system
- 2 Wired network (electric communication lines)
- 30 ESL server (server device)
- 70 Shelf tag terminal (merchandise information display terminal)
- 70aA 1st display unit
- 80 Video display terminal (merchandise information display terminal)
- 80A Merchandise information display terminal
- 80j, 80jA Input operation unit
- D Display area (second display unit)

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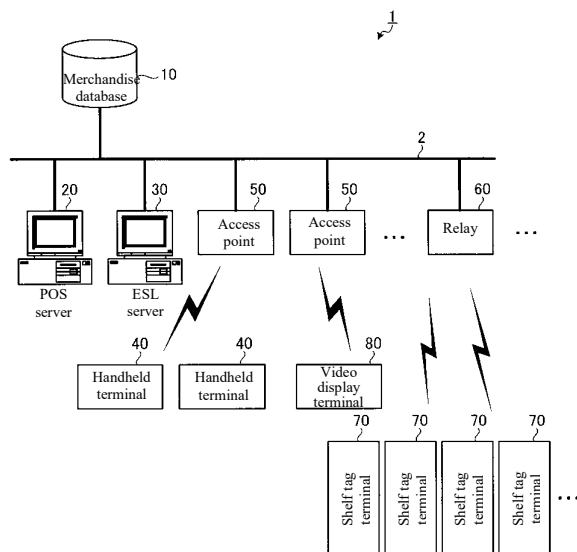
[Prior Art Literature]

[Patent Literature]

【 0 0 5 5 】

[Patent Literature 1] JP 3560988 B2

[FIG. 1]



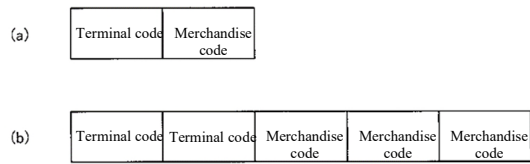
[FIG. 2]

10a				
Merchandise code	Merchandise name	Unit price	Sales price	Merchandise classification code

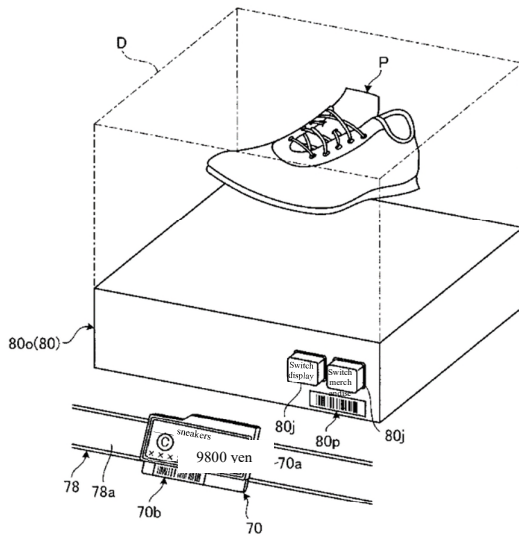
[FIG. 3]

10b		
Merchandise code	Image data (view 1)	Image data (view 2)

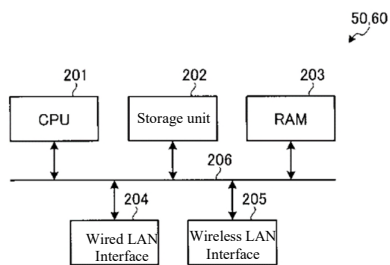
[FIG. 4]



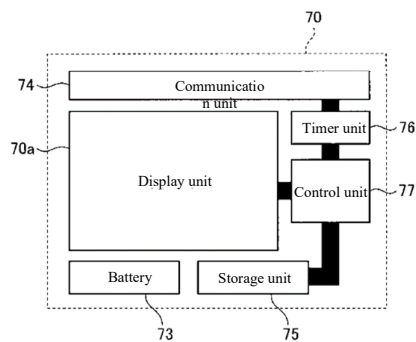
[FIG. 5]



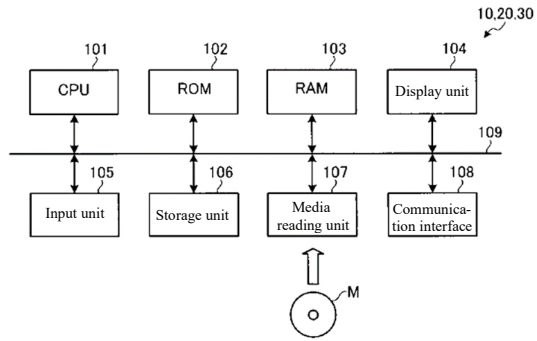
[FIG. 8]



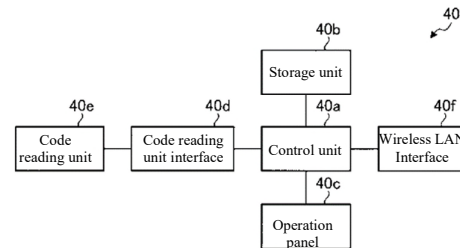
[FIG. 9]



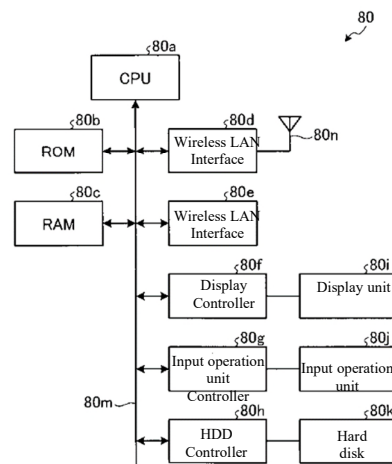
[FIG. 6]



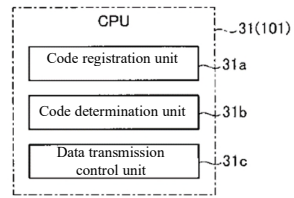
[FIG. 7]



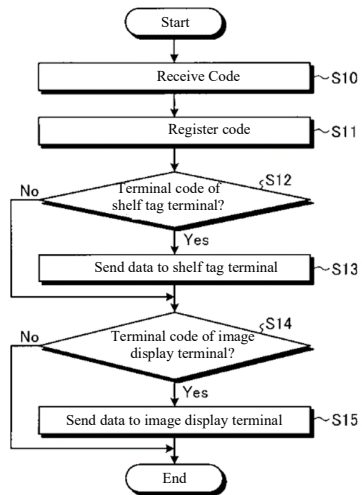
[FIG. 10]



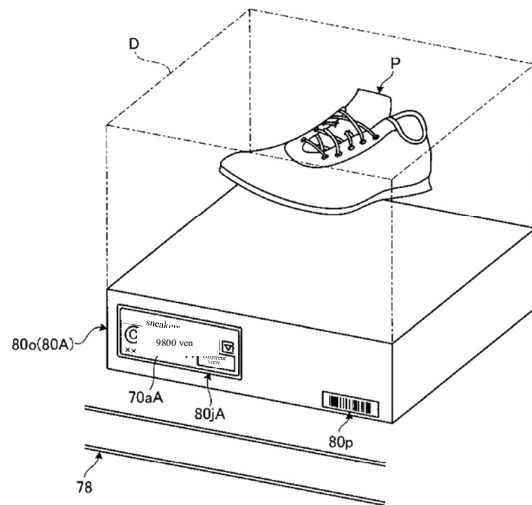
[FIG. 11]



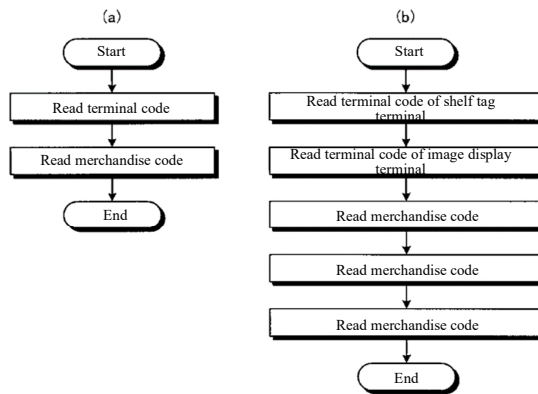
[FIG. 12]



[FIG. 14]



[FIG. 13]



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	A47F	5/00	E